Graduate Student Orientation

For new graduate students, the academic year begins with a Graduate Student Orientation event designed to ease the transition to graduate study at Iowa State. This is a time to become acquainted with the Human Computer Interaction Interdepartmental Graduate Program and its members, and to prepare for registration and the start of classes. In addition to participating in the HCI orientation events, students also will take part in orientation activities offered by the Graduate College and International Education Services. Students should refer to all schedules for information about orientation activities.

New HCI students are admitted to the program in one of two categories:

- **First year students**
  New students admitted into HCI as a major will either be assigned an academic department or will take part in a rotation through the program until the student makes a final selection of an academic department. A rotation through HCI allows the program to admit students in cases in which a decision on the academic department needs some time for consideration or the major professor is not yet known. The program requires that the academic department be assigned within one year.

- **Current ISU students admitted to HCI as “transfers,” “co-majors” or “concurrent degree candidates”**
  A student admitted to HCI as a transfer from another ISU department or program, or as a co-major or concurrent degree candidate usually has the same home department as that of his/her major professor.

Establishing a Home Department

For administrative purposes, the major professor’s department is generally the student’s home department. If a student is admitted through an HCI rotation, the student must initiate a Request to Establish a Home Department for Students Admitted to Interdepartmental Majors form [http://www.grad-college.iastate.edu/forms/files/EstablishDepartment.doc](http://www.grad-college.iastate.edu/forms/files/EstablishDepartment.doc) and submit it to the HCI administrative office. All HCI students should have filed their Home Department forms within one year after starting the program.

On the Home Department form, in Section II, after “Comments,” the major professor must note his or her agreement to accept the student and to arrange or provide funding. The major professor should then sign the “Major Professor” line. Academic departments will, in most cases, review this application based on existing departmental standards before approving.
Appointing a Program of Study (POS) Committee

After choosing the major professor and establishing a home department, students should work with him/her 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 POS committee must be in accordance with the Graduate College guidelines.

The POS 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.

For PhD candidates, the POS 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.

Approval of the Program of Study (POS)

After choosing a major professor and establishing a POS committee, students must file a Program of Study. The Graduate College Program of Study serves as a contract between the student, committee, and the Graduate College, indicating the minimum coursework that must be completed for the PhD or MS degree.

In preparing the Program of Study, the student and major professor should refer to the HCI course requirements to ensure that the planned coursework: 1) meets the HCI requirements, 2) meets all Graduate College requirements, and 3) is appropriate based on the student’s planned research project. The POS committee will approve the POSC form if these conditions are met. If courses listed on the POSC form do not meet all HCI requirements, the POSC form will NOT be approved by the HCI program chair (unless a memo of justification is provided by the POS committee). Substitutions for core courses must be requested via e-mail to the HCI program chair with a copy to the major professor. These requests are required before registering for any proposed substitute core course.

Required Courses

A. PhD Requirements:

Iowa State University requires a minimum of 72 graduate credits to earn a PhD. At least 36 graduate credits, including all dissertation research, must be earned at ISU. The 36 credits earned at Iowa State must include the six required courses, the HCI Seminar, and Research Credits listed below. Credits from a student’s master’s degree can be applied to the POS. Of the 72 credits ISU requires for a PhD, 31 credits (listed below) are programmatic requirements for HCI.
• Core courses required (18 credits):

**CORE COURSES:** (choose one course from each category below):

**Design**
- HCI 521 Cognitive Psychology of HCI
- ArtGR 672B Graphic Design and Human Interaction: Design for Social Inclusion

**Implementation**
- HCI 575 Computational Perception
- HCI 574 Computational Implementation and Prototyping
- HCI 573X User Interface Implementation for Web Applications
- CprE/ME 557 Computer Graphics and Geometric Modeling

**Phenomena**
- JLMC / TSC 574 Communication Technology and Social Change
- HCI 589X Design and Ethics

**Evaluation**
- ENGL/STAT 332 Visual Communication of Quantitative Information
- PSYCH 501X Foundations of Behavioral Research
- STAT 480 Statistical Computing Applications
- HCI 504 Managing and Evaluating Instructional Technology Programs
- HCI 522 Scientific Methods in HCI

In addition to the four core courses, students are required to choose two additional courses, either from the list of core courses above or from the list of recommended electives below.

**RECOMMENDED ELECTIVES:**

- ArtIS 508 Computer Aided Visualization
- CI 503 Theories of Designing Effective Learning and Teaching Environments
- CI 511 Technology Diffusion Leadership and Change
- HCI 510 Theories of Game Based Learning
- HCI 520 Computational Analysis of English
- HCI 522 Scientific Methods in HCI
- HCI 558 Introduction to the 3D Visualization of Scientific Data
- HCI 580X Virtual Worlds and Applications
- HCI 585X 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 HCI
- HCI 603 Advanced Systems Design
- HCI 681X Cognitive Engineering
- IE 577 Human Factors
- ME/WLC 584 Technology, Globalization and Culture (Phenomena)
- ME/HCI 525 Optimization Methods for Complex Designs (Implementation)
- STAT 401 Statistical Methods for Research Workers (Evaluation)

- **HCI 591 Seminar (4 credits minimum):**
  - PhD students are required to take HCI 591 Seminar in HCI for four semesters.

- **Research (9 credits minimum):**
  - Minimum of 9 total research credits, which must be completed under the supervision of the POS committee.

Additional courses may be added at the direction of the Program of Studies Committee. A 3.0 GPA or better is required.

**Preliminary Examination (PhD only)**

The Graduate College requires that all PhD students pass a Preliminary Examination before advancing to candidacy for the doctoral degree. To initiate this process, the student must file a Request for Preliminary Examination form (available from department and program administrative offices and the Graduate College). The Preliminary Examination meeting is completed before the end of the first semester of the third year and must take place at least 6 months prior to the final defense. All POS committee members must be present. The examination must contain both a written and an oral component. Master’s degree candidates are not required to take a Preliminary Examination. Research proposals that serve as the written component of the Preliminary Examination are submitted to the POS committee at least two weeks before the Preliminary Examination.

**Writing the Dissertation or Thesis**

The thesis is due generally two weeks prior to graduation. Thesis deadlines for the semester are found at [http://www.grad-college.iastate.edu/calendar/](http://www.grad-college.iastate.edu/calendar/)

The Electronic Thesis/Dissertation webpage found at [http://www.grad-college.iastate.edu/current/thesis/](http://www.grad-college.iastate.edu/current/thesis/) provides thesis format requirements as well as submissions requirements and procedures. If research data from other students or researchers is included in the thesis (e.g., the student is one of several co-authors on a manuscript included in the thesis), instructions in the ISU Thesis Manual describe how to clearly indicate co-authors’ roles in the research and/or preparation of the manuscript.

Students should refer to the Thesis Checklist found at [http://www.grad-college.iastate.edu/current/thesis/checklist/](http://www.grad-college.iastate.edu/current/thesis/checklist/)

The university instituted an electronic theses submission process beginning in the Fall 2006 semester. Directions for submitting your thesis can be found in the links above.
**Application for Graduation**

Students must submit to the Graduate College an *Application for Graduation* indicating the expected semester of graduation. This is done through the student’s AccessPlus account. It must be submitted by the deadline. Deadlines can be found at [http://www.grad-college.iastate.edu/calendar/](http://www.grad-college.iastate.edu/calendar/). If a student does not graduate at the expected time, a new Application for Graduation must be submitted for a subsequent semester.

**Final Examination**

The Final Examination for the PhD degree is an oral defense of the dissertation. This defense includes a required formal seminar presentation of dissertation research to the Human Computer Interaction faculty, students, and other members of the Iowa State academic community.

Students should submit a *Request for Final Examination* form after the dissertation work has been completed and all the other requirements have been met. After receipt of this form, the Graduate College will send a *Report of Final Examination* form directly to the major professor. The major professor is responsible for bringing this form to the final oral examination.

Students should provide the HCI office with the text of their formal seminar announcement *at least two weeks prior* to the seminar. An e-mail message will be sent to the HCI and Virtual Reality Applications Center (VRAC) faculty and graduate students announcing the seminar. Following the public seminar (usually, but not always immediately afterwards), an oral examination (closed to the public) will be administered by the POS committee. All members of the POS committee must be present at this meeting. This examination will review the dissertation or thesis as well as the candidate’s knowledge of relevant subjects.