Policies and Procedures

Interdisciplinary Graduate Program in Informatics
2021-22

Approved by Steering Committee composed of Juan Pablo Hourcade, Caglar Koylu, Padmini Srinivasan, and Mark Stamnes, March 10, 2021.

Approved by Department of Computer Science Faculty, April 2, 2021.

Modified on July 12, 2023 by Executive Committee.

Modified on March 13, 2025.

Introduction

The Interdisciplinary Graduate Program in Informatics (IGPI) was proposed in 2006 largely motivated by the increasing amount of research at the intersection of computational disciplines and the humanities, arts, and the natural, biological, health, and social sciences. The proposal to establish the program emphasized the rapid changes brought about by information technology and how they in turn changed approaches across a wide variety of disciplines. Among these changes were the ability to ask different types of questions and analyze information at scales not previously possible.

The program aimed to fill a gap in training for practitioners and researchers who could provide a bridge between computing and other disciplines. IGPI graduates would receive training in core computational and statistical topics and combine it with coursework in a cognate area.

Changes in computing and how it affects society and scholarship make informatics even more relevant today than it was in 2006. One of the key changes has been in the increasing ubiquity of computer devices that facilitate communication and information access. These trends clearly point toward a near future where most people will be able to communicate with most other people around the world, as well as access any information, anytime, anywhere. The main barriers are likely to be political instead of technological. These changes mean that computers are directly affecting the way most people perceive the world, remember information, pay attention, communicate, learn, and make decisions.

This ubiquity means that it is becoming increasingly difficult to exercise our basic rights and fulfill our basic needs without using interactive technologies. We use computers to vote, to stay informed, and to express and share our opinions. We also use them to ride public transportation, get money from our bank, and pay for groceries. Hence, there are increased responsibilities in the design of computing systems, as well as the need to study their impact on society.

One final trend that is germane to informatics is the increasing availability and low cost of digital storage and processing, together with the wide availability and use of sensors, digital instruments, and other forms of capturing digital data. The result has been a tremendous growth in the amount of data available to scientists, businesses, and government. These changes have brought about the need for novel analysis techniques, for researchers and practitioners who can understand the data and these techniques, as well as the need to design these systems so they can enable new discoveries and insights while safeguarding privacy.

This new world, where computers are playing a vital role not only in academic disciplines, but in society at large, calls for practitioners and researchers who can understand computing and also interface with other fields. IGPI was developed to fill this gap at the University of Iowa.

Nondiscrimination Statement

The University of Iowa prohibits discrimination in employment, educational programs, and activities on the basis of race, creed, color, religion, national origin, age, sex, pregnancy, disability, genetic information, status as a U.S. veteran, service in the U.S. military, sexual orientation, gender identity, associational preferences, or any other classification that deprives the person of consideration as an individual. The university also affirms its commitment to providing equal opportunities and equal access to university facilities. For additional information on nondiscrimination policies, contact the Director, Office of Equal Opportunity and Diversity, The University of Iowa, 202 Jessup Hall, Iowa City, IA, 52242-1316, 319-335-0705 (voice), 319-335-0697 (TDD), diversity@uiowa.edu.

Program Administration

Program Director, also serving as Director of Graduate Studies: Juan Pablo Hourcade

Academic Services Coordinator: Sheryl Semler

Admission

The University of Iowa Interdisciplinary Program in Informatics offers three graduate degree programs: a research-oriented Doctor of Philosophy (PhD) degree; a professionally oriented Master of Science (MS) degree, and a Certificate.

Choice of Program

Candidates are advised to apply directly to the program best suited to their academic goal. Students interested in pursuing research or academic careers should apply to the PhD program, while those seeking additional preparation, beyond their undergraduate training, for industrial careers should apply to the MS program. Students interested in adding informatics to another major area of study would be best served by the Certificate.

Students applying to the PhD program need not have a master's degree prior to admission. PhD candidates may opt to receive an MS degree while working towards the PhD, although there is no requirement to do so. Students who hold a master's degree upon entering the PhD program may apply for transfer credit of their master's courses towards the PhD program requirements (see "Transfer Credits").

Students applying to the PhD program who are not selected for admission will automatically be considered for admission to the MS program if they do not already hold a master's degree.

Application Process

The candidate must file an application for admission online. The candidate must also submit official transcripts, test scores and other supporting material (e.g., a statement of purpose) by the designated deadline for the session in which admission is requested. The University of Iowa application fee must be paid before the application is considered.

Application Deadlines

Those seeking admission for the fall semester must have their completed applications on file by January 1. For full consideration, all supplementary materials (transcripts, letters of recommendation and statement of purpose) should also be received by that date. We do not do summer admissions, but we do a very small number of spring admissions, under exceptional circumstances. Students interested in spring admission are required to receive permission to apply from the Director of Graduate Studies and must complete their application by October 15.

Early Admission

A student who is within 6 semester hours of having satisfied all the requirements for the bachelor's degree at The University of Iowa or any other accredited college may be granted early admission to the Graduate College. With early admission, the student may begin their graduate course work at the same time they are completing their last semester of undergraduate study.

Deferred Admission

Students admitted to either the PhD or MS program may request a deferral of admission, one time only, for up to one year beyond the originally specified matriculation date. While such deferrals are automatically granted, students offered admission with financial support who defer their start date will not be guaranteed the same financial package the following year.

Readmission

Students who are admitted to an Informatics graduate program, but who then fail to register for a period of 12 months or more must complete an Application for Readmission to a Graduate Program (to resume study in the same graduate program), found at https://grad.admissions.uiowa.edu/apply/returning-graduate-students on the Admissions website. Acceptance is dependent upon departmental approval for the session in which readmission is desired. Consideration of the application for readmission will be governed by the departmental and Graduate College admissions standards in effect at the time of reapplication.

Reconsideration

Candidates not selected for admission may request reconsideration, one time only, for the following academic year without preparing a new application by contacting The University of Iowa Office of Admission and requesting a change in session, or by requesting that the Academic Services Coordinator initiate the change. Note that it is the candidate's responsibility to ensure that any updated information or documentation is provided before subsequent application deadlines.

Dual Degrees

Students in the doctoral program of another UI department may elect to pursue an MS degree or Certificate concurrent with their doctoral program. Students will need approval from their home department before requesting admission to the MS or Certificate program. Contact the Academic Services Coordinator for more information.

Change in Program

A student's goals may change once they begin graduate study. Any student contemplating such a change in status should discuss the issue with their advisor and the Director of Graduate Studies.

After consulting their faculty advisor, students opting to drop from the PhD to the MS program may do so by filing an appropriate Graduate College Change of Status form with the Department Academic Services Coordinator. Such requests are almost always approved.

Students originally admitted to the MS program may also request a change in status to enter the PhD program. Note, however, that since the PhD is the more selective of the two programs, a request to change from the MS to the PhD program is not approved automatically, and will go through the same review process as external applicants to the PhD program. These applications are all considered together in the spring for the following fall admission. See Application Process and Application Deadlines for more information on the application process.

Financial Support

The program commits to provide financial support to full-time PhD students during their first four years in the PhD program, for PhD students admitted on or after the Fall of 2021, provided appropriate academic progress is maintained, expectations of assistantship are met, English proficiency requirements for a teaching assistantship are met, and funds are available. This progress is measured by timely completion of qualifying, comprehensive, and final exams, research productivity, grades, and performance of assistantship duties. Beyond the first four years, students should expect to be supported by their PhD advisor as a Research Assistant (RA), or through fellowships or other non-departmental resources. The Department sometimes provides Teaching Assistant (TA) positions for students who are beyond their fourth year, especially in cases where the student received RA support or fellowships during one or more of the first four years of the program. MS students may also receive support as a TA.

Several other forms of financial support are available through the Graduate College and the University. These include graduate teaching assistantships, research assistantships, scholarships, Post-Comprehensive Research Awards, Summer Fellowships, Seashore-Ballard Fellowships, and, for exceptional entering students, Iowa Recruitment Fellowships. External fellowships, such as the NSF Graduate Fellowships, are also available and the Graduate College provides funding consultations. Competition for these positions is significant.

A student must be formally admitted to the Graduate College before being tendered any form of graduate appointment. Scholars, fellows, and research and teaching assistants must be registered as students in good standing in order to hold such appointments. Appointments will be terminated when student status is terminated.

Stipends

During the academic year (i.e., fall and spring semesters), students appointed to an assistantship position are usually appointed to a 50% assistantship. Somewhat rarely, a student may be appointed to a 25% assistantship. In the program, 50% assistantship stipends cover the cost of living and schooling for our TAs and RAs. The University publishes reasonable cost estimates, for the College of Liberal Arts, on its web page.

Graduate assistants holding appointments of 25% or greater are assessed tuition at the resident rate. In addition, students holding at least a 25% appointment and enrolled for 9 or more semester hours of coursework will receive a full tuition scholarship. The tuition scholarship is prorated if the student is enrolled for fewer than 9 semester hours. The student will also receive a fee scholarship for 50% of the mandatory student fees assessed in the fall and spring semesters.

English Proficiency

All graduate students whose first language is not English are evaluated for verbal English proficiency upon matriculation into a Computer Science graduate program. The results of the ESPA and ELPT tests determine the kind of teaching that can be assigned – full responsibility, a discussion or lab section, or to grade papers – if a teaching assistantship is applied for.

If an A or B level of certification is not initially achieved, additional English language courses are recommended through the English as a Second Language (ESL) Programs Office. The program will pay for you to take the course TAPE:5300-Presentation skills one time only and expects you to have a minimum of a B rating by the end of your second semester.

For MS students, who are not guaranteed funding, our department does not cover the expense of taking additional TA preparation courses, and you are responsible for these expenses.

Course Requirements on Responsible Code of Conduct

Funding agencies (e.g., NSF and NIH) require that graduate students and post-docs that they fund, receive training on responsible conduct of research. In response the Graduate College has asked departments to develop courses that provide this training.

PhD and MS students in the Informatics graduate program are required to take CS:5980-Topics in CS III-Computing Research Ethics. to satisfy this requirement. It is expected that all PhD students complete this course within their first two years. In addition, MS students who work as RAs, must also complete this course as soon as possible after the start of their Research Assistantship.

Sexual Harassment Education

All students holding graduate assistantships for the first time must complete sexual harassment training. Renewal appointments will not be processed for anyone who has not completed the training. The CS Academic Services Coordinator will provide information on this and will assist in registering students for the relevant training.

Returning graduate assistants must take a refresher course in sexual harassment training every three calendar years from the date of the most recent training.

Assistantship Job Expectations, Performance Review, and Workload

Early in the semester, all RAs and TAs will receive written notification of their assistantship expectations and general guidelines as to the time needed to perform each task within their job description. Feedback from faculty supervisors and teaching evaluations will be used to conduct regular performance reviews. NOTE: Renewal of assistantships is subject to satisfactory performance of assistantship duties, and being in good standing as a student, and satisfying English proficiency requirements.

 A quarter-time (25%) assistantship carries a responsibility for an average of 10 hours of work per week; a half-time (50%) assistantship means an average of 20 hours per week. Except in unusual circumstances and when prior approval has been obtained, appointments or combinations of appointments exceeding 50% are not permitted.

Teaching Assistantships

Teaching assistantships are the most common form of financial support, generally given to PhD students in the early years of their studies and possibly MS students. Teaching assistantships serve two purposes:

assistance in the instructional program of the University and the preparation of future teachers. However, even students not aiming to become teachers greatly benefit from the improved technical communication skills that usually result from a teaching assistantship. Further details regarding teaching assistantships are located within the Teaching Assistant Handbook included with this publication.

Application Process

All graduate students seeking financial support as a TA must formally apply for an award before the specified deadline. Notices describing how to apply for support will be sent to all graduate students in October for the spring semester and in March for the summer session and fall semester.

Attendance Policy for TAs

Start Date for TAs: The first day of the TA appointment is the third business day before classes begin. Unless pre-approved, failure to report by that time may result in loss of appointment or pay deduction.

End Date for TAs: The College views graduate TAs as professionals and expects them to fulfill their professional obligations before leaving. In the case of TAs, the last date of work is the date that final grades are due. The last date of work may be earlier with the permission of the faculty supervisor.

Absence Policies for TAs

TAs must report to their faculty supervisor if they will be absent from class or unable to perform their TA duties due to illness or family emergencies. The faculty supervisor and Director of Graduate Studies or the DEO of the department offering the course must pre-approve absences for any other reasons or for absences of more than one week. The faculty supervisor alone cannot approve an absence in those cases. Schedules cannot be substituted or exchanged with other TAs without prior approval by the faculty supervisor and the Director of Graduate Studies or the DEO of the department offering the course. TAs are not expected to make up for time missed on an hour-for-hour basis. Rather, they are expected to fulfill their job responsibilities in a timely and professional manner; for example, scheduling an extra class or holding additional office hours if necessary.

Research Assistantships

Research assistantships are awarded by faculty to qualified graduate students to participate in scholarly research. In awarding research assistantships, faculty members often give preference to PhD students and those who demonstrate strong potential for research. RA positions should be sought by contacting individual faculty members; the Department does not award RA positions directly.

Attendance Policy for RAs

Start Date for RAs: The first day of the RA appointment is the first day of classes.

End Date for RAs: The College views graduate RAs as professionals and expects them to fulfill their professional obligations before leaving. In the case of RAs, the last date of work is the last day of the semester (i.e., the end of Final Exams Week). The last date of work may be earlier with the permission of the faculty supervisor.

Absence Policies for RAs

All RA absences, except for illnesses or family emergencies, must be pre-approved by the faculty supervisor. The faculty supervisor and the Director of Graduate Studies or the DEO must pre-approve absences for other reasons or for absences of more than a week. RAs are not expected to make up for

time missed on an hour-for-hour basis. Rather, they are expected to complete their work assignments in a timely and professional manner.

COGS

Specific terms and conditions of employment for graduate assistants are largely governed by the collective bargaining agreement between The University of Iowa and the United Electrical, Radio and Machine Workers of America union, Local 896, more commonly known as COGS (Campaign to Organize Graduate Students). The COGS contract may be viewed directly from the COGS website.

Registration Requirements

Full-time students are normally expected to take at least 9 semester hours during the fall and spring semesters. An exception would be for MS students in their final term, who may register for less than 9 semester hours, as well as PhD students who have completed their comprehensive exam.

Occasionally, students holding assistantships and actively involved in research may be permitted to take as few as 6 semester hours. Such students must complete a "short hours" form, signed by their advisor, and filed with the Registrar's Office. Additional constraints apply to international students seeking reduced hours, who must complete both the "short hours" form and an online form offered by the International Student and Scholar Services (ISSS). Approval is typically granted only to post-comp PhD students.

Note that students awarded Graduate College funded fellowships, in the summer, must be registered for a summer session course. At the present time, summer TAs and RAs need not be registered for classes in a summer session if they were registered during the preceding academic year.

Full-time vs. Part-time Status

Students should be aware of consequences when dropping courses result in part-time status. Full-time status for graduate students is 9 semester hours or more; half-time status is 5-8 s.h.

Visa status may be affected by anything less than full-time status for international students during the academic year. Forms must be submitted to ISSS at the beginning of each applicable semester. Use the form, Part-Time Authorization for Academic Reason, available on the ISSS website.

If a student has been in the U.S. more than five years, they must be at least half time to be exempt from Social Security and Medicare paycheck deductions.

Students must be at least half time for purposes of student loan deferment.

If applicable, the Registrar's "short-hours form" is available from the Academic Services Coordinator, or the Registrar's Service Center, 17 Calvin Hall.

Ph.D. Degree

The PhD program emphasizes preparation for research, teaching, and scholarly endeavor in academic settings or private, industrial, or governmental laboratories. It requires completion of a minimum number of semester hours of coursework, satisfactory performance on the qualifying exam, comprehensive exam and the proposal, and the production and formal defense of a dissertation describing original research results. The requirements described here are in addition to the University-

wide requirements for the PhD degree described in the Manual of Rules and Regulations of the Graduate College, Section XII.

Advising

Every graduate student must have a faculty advisor. For PhD students, the faculty advisor usually also serves as the research supervisor and thesis committee chair. Entering students may be tentatively assigned to a faculty member whose research interests align with their own.

Advisor Selection

Each student should select a PhD advisor from among the program faculty. On the rare occasion when a student chooses a PhD advisor who is outside the program, a co-advisor from the program faculty must be designated.

Once a faculty member has agreed to serve as a student's advisor, a Change of Advisor form, if applicable, should be filed with the Academic Services Coordinator. The Department recognizes that an individual student's interests may change with time, and that this may result in a student changing advisors accordingly.

Course Requirements

The Ph.D. in informatics requires a total of 72 semester hours beyond the bachelor's degree. A total of 19 semester hours of core courses are required, with an additional 12 semester hours of courses approved by the student's committee.

Core Courses
Programming (2 courses)

Required: CS:5110 – Introduction to Informatics (Fall)

One of the following:

CS:3210 – Programming Languages and Tools (Fall and Spring)

CS:3980 – Topics in Computer Science I (Fall and Spring)

GEOG:5055 – Geospatial Programming (req for Geoinformatics students) (Spring)

Statistics
One of the following:

STAT:4143 – Introduction to Statistical Methods (Fall and Spring)

BIOS:4120 – Introduction to Biostatistics (required for Health Informatics students) (Fall and Spring)

Data Science
One of the following:

BAIS:6480 – Knowledge Discovery (Fall)

STAT:4540 – Statistical Learning (Fall) (take after completing Statistics requirement)

Or additional approved courses listed every semester.

One of the following:

CS:4400 – Database Systems (Fall)

GEOG 4580 – Geographic Databases (req for Geoinformatics students) (Fall)

One of the following:

CS:4500 – Research Methods in HCI (Fall)

CS:4510 – Human-Computer Interaction for CS (Fall)

GEOG:5540 – Geographic Visualization (req for Geoinformatics students) (Spring)

CS:5980 - Computing Research Ethics (Spring)

Additional Courses

The student's advisor and the rest of the student's committee consisting of at least two other faculty select remaining courses for a total of at least 31 semester hours of coursework. These additional courses are expected to be in the student's area of specialization in informatics (e.g., health sciences, biology, geography, information science, etc.). The remaining 41 semester hours may be completed with additional courses or through reading or research semester hours.

Transfer Credits

Graduate Admissions and the Department will review graduate coursework already completed that may warrant transfer credit. Advising sessions will determine how those credits will affect the student's program requirements. Note: regardless of how many transfer credits are awarded, Graduate College residency requirements must always be satisfied. Also, transferred courses that are being used to satisfy program requirements must be less than 10 years old at the time of the comprehensive exam.

To have a program requirement waived on the basis of prior graduate coursework, or transfer credits to a University of Iowa degree, the student must submit a petition to the Director of Graduate Studies. The petition form is available at the end of this handbook (or online here), and completed forms should be filed with the Academic Services Coordinator.

IGPI Doctoral Guidelines and Deadlines

Progressing toward degree completion at an appropriate rate

An appropriate rate of progress should keep students within the following schedule for completion of milestones.

Program Milestone	Semester
Identify Advisor	2nd semester
Qualifying Exam	3rd semester
Comprehensive Exam	3rd year
Proposal Exam	4th-5th year
Final Exam	5th-6th year

Continuance, Probation & Dismissal for Ph.D. Students

The Interdisciplinary Graduate Program in Informatics (IGPI) expects that doctoral students will make timely progress toward the completion of their degree. In general, it is anticipated that Informatics graduate students will complete all degree requirements within 5-6 years. Progression targets, which include series of established degree program milestones along with recommended timing and sequence, are based on the Program Milestone table presented above. These milestones correspond with the formal requirements of earning a Ph.D. in Informatics.

Normal* progress is required in order for students to be in good standing in the program. Failure to make normal progress will result in students being placed on probation. Under exceptional circumstances, the faculty, with the approval of the Director of Graduate Studies, may grant continuance even when normal progress has been interrupted.

 *Normal progress is defined as:

(1) **Progressing toward degree completion at a timely rate**. A timely rate of progress should keep students within the Program Milestone schedule above. Timing begins at the point of students' first semester in the program after admission.

(2) **Satisfactory progress and performance in course work**. Satisfactory progress and performance in course work means a student's cumulative GPA should be at or above 3.0, and that a student is only taking courses in an approved plan of study (filed through Workflow).

Failure to maintain normal progress will result in a student being placed on probation. Students who are placed on probation will receive written notification, which is to include the action(s) necessary to return to good standing. Students will have one semester to complete the action(s) required in the written notice. Failure to satisfy the remediation plan will result in dismissal.

Being placed on probation can jeopardize funding support (e.g., assistantships or fellowships).

Dismissed students who are supported by assistantships or fellowships lose that support until and unless they are formally reinstated into the program.

Appeal

 Students dismissed from the graduate program, or placed on probation may appeal in writing to the Director of Graduate Studies, who will rule on the case. Students have 10 days to appeal after they are notified of dismissal or probation.

If a student wishes to appeal the decision of the Director of Graduate Studies, they may do so according to the "Academic Grievance Procedures" of the Graduate College.

Exam Structure

Qualifying Exam

The purpose of the qualifying exam is to demonstrate the ability to read, analyze, synthesize, and communicate current research results.

Qualifying Exam Timetable

PhD students should take the qualifying exam at the beginning of their second year. PhD Students should start interacting with their initial advisor as soon as possible – preferably early in the fall semester – to set up a plan for starting research that will lead to success in the qualifying exam. Students must pass the qualifying exam by the end of their second year.

Qualifying Exam Structure

A qualifying exam is based on a small number (3-5) of research articles selected in consultation with the student's advisor. The candidate prepares a 15-20 page synthesis/discussion of this material. It is okay for a paper co-authored by the student to be one of the research articles covered by the qualifying exam report, however such a paper, by itself, cannot serve as a qualifying exam report.

Qualifying Exam Panel

Each student attempting the qualifying exam is required to file a Request for PhD Qualifying Exam form and submit the qualifying exam report two weeks prior to taking the Exam. A panel of three faculty belonging to the program should be selected in consultation with the student's advisor. The candidate should make a 20-40-minute oral presentation during the Exam. The three-member faculty panel (which may include the student's advisor) will decide the outcome of the exam by majority vote.

Qualifying Exam Failure

A student who fails the qualifying exam will be permitted to repeat the exam one additional time. PhD students who do not pass the qualifying exam by the second semester of the second year (regardless of the number of attempts undertaken) will be automatically switched into the MS program.

Comprehensive Exam

Please note that rules governing the comprehensive exam (unlike the qualifying exam) are mandated by the Graduate College. Students should always refer to the Manual of Rules of Regulations of the Graduate College as the final authority in the case of any perceived inconsistencies.

The comprehensive exam will consist of a review of the literature and preliminary outline and investigation of a research problem that will be pursued for the PhD thesis. Students should plan to pass their comprehensive exam before the end of their third year to remain in good standing.

Comprehensive Exam Structure

The structure and evaluation of the comprehensive exam follows the procedures outlined in the Manual of Rules and Regulations of the Graduate College, Section XII (K). With the help of the Academic Services Coordinator, the student should update their departmental Plan of Study and complete a Request/Report for Doctoral Comprehensive Exam form and a Doctoral Plan of Study Summary Sheet found on the Grad College website. The Academic Services Coordinator will ensure that the appropriate paperwork is submitted to the Graduate College for approval. Students must be registered for classes at the time of their comprehensive exam.

The exam will prepare a 20-30 page survey/discussion (along the lines of the introduction and literature review from an eventual thesis) for distribution to their faculty committee, followed at least two weeks later by a brief 20-40 minute oral presentation, and a question/answer session.

The comprehensive exam committee, arranged by the student, requires a minimum of four faculty members, of which three must be UI tenure-track faculty. At least two of the faculty members are from

the program and are members of the University of Iowa tenure-track faculty. In addition, no more than three panelists should be from the same home department. The committee must be approved by the Director of Graduate Studies and appointed by the Dean of the Graduate College.

Master's Degree (MS) at Comprehensive Exam

Students may request that the MS degree be granted at the time of the comprehensive exam by notifying the Academic Services Coordinator at the time the comprehensive exam paperwork is completed. The MS degree without thesis is awarded upon successful completion of the comprehensive exam but may, at the examination committee's discretion, be awarded even if the student does not pass the exam. Students may also choose to complete the thesis requirements and be awarded an MS with thesis degree. If an MS degree is to be awarded, please be aware of the appropriate deadlines (e.g., for submission of the Application for Degree and Plan of Study Summary Form).

Post-Comprehensive Exam Registration

After completion of the comprehensive exam, the student is required to maintain continuous registration (fall and spring semesters) through completion of the dissertation and graduation. Note that there are special rules for post-comprehensive exam registration, as students will typically not be enrolled in classes, but rather will be working exclusively on the thesis requirement (see Section XII [L] of the Manual of Rules and Regulations of the Graduate College).

Please note that post-comp registration must be for a minimum of 1 semester hour. For example, cooperative internships for 0 semester hours do not satisfy the registration requirement.

Academic Registration Requirement

Student registration should reflect accurately the amount and kind of work undertaken in the Graduate College. The Ph.D., D.M.A., and DNP are granted primarily on the basis of achievement, and engagement with one's discipline is an important part of achieving quality in a dissertation. The purpose of the registration requirement is to promote a high level of intellectual and scholarly activity at The University of Iowa. These requirements foster intensive, concentrated engagement with the faculty members and graduate students in a student's program.

All doctoral programs will contain a minimum of 72 semester hours of graduate work. Of those 72 semester hours, at least 39 must be earned while registered in The University of Iowa Graduate College, and after formal program admission. For example, the academic registration requirement cannot be fulfilled by coursework completed under the non-degree or non-departmental student classification or with transfer credit.

A student must be registered in the semester in which he/she earns his/her degree. For full details, see the Manual of Rules of Regulations of the Graduate College, Section XII (C).

Proposal Exam

At least six months prior to the final exam, a student must form a dissertation committee and circulate a formal thesis proposal to the committee. The proposal should describe the research performed to date, any related work, and outline the expected thesis results. The student must, in essence, argue the originality and significance of the expected results to the committee in a manner consistent with their advisor's counsel (this may or may not include an oral presentation). Possible outcomes of a thesis proposal are (i) the committee finds the proposal satisfactory, or (ii) the committee suggests

modifications and in a few weeks after the proposal the student and committee reach a consensus (via e-mail or meetings) on a modified set of expected thesis results, or (iii) the committee asks the student to redo their proposal, likely with a fresh proposal document and oral presentation, giving the student enough time to address the committee's concerns.

Students should complete the form, Request to Appoint a PhD Committee/Proposal Defense, when all members have agreed to serve on the committee and a tentative date has been set for the proposal defense. The committee, proposed by the candidate and his or her advisor, requires a minimum of four faculty members, of which three must be UI tenure-track faculty. At least two of the faculty members are from the program and are members of the University of Iowa tenure-track faculty. In addition, no more than three panelists should be from the same home department. The committee must be approved by the Director of Graduate Studies and appointed by the Dean of the Graduate College.

Final Exam

The dissertation must describe original research performed by the PhD candidate and must be defended before a faculty committee. Please note that rules governing the final exam/dissertation defense (unlike the qualifying exam) are mandated by the Graduate College and not the Department. Students should always refer to the Manual of Rules of Regulations of the Graduate College as the final authority in the case of any perceived inconsistencies in determining all requirements that must be met.

The structure and evaluation of the final exam will follow the procedure outline in the Manual of Rules and Regulations of the Graduate College, Section XII (M) through XII (P). The final exam committee, which should be the same as the committee composed for the proposal defense, unless there are extenuating circumstances, must be approved by the Director of Graduate Studies and appointed by the Dean of the Graduate College. With the help of the Academic Services Coordinator, students should complete a Request/Report for Final Examination: Advanced Degree, found on the Graduate College website. Be aware that the appropriate paperwork, especially thesis deposits, must be filed with the Graduate College within the specified time constraints. Further details regarding submission and formatting requirements, for the thesis, is also found on the Graduate College website.

Master's Degree

The MS is a non-research, course-based program for students who wish to enhance their careers with advanced knowledge of informatics. The requirements described here are in addition to the University-wide requirements for Master's degrees described in the Manual of Rules and Regulations of the Graduate College, Section X.

Course Requirements

The Master's in informatics requires a total of 31 semester hours beyond the bachelor's degree. A total of 19 semester hours of core courses are required (shared with the Ph.D.), with an additional 12 semester hours of courses in the student's chosen cognate. The courses by cognate are listed below.

Geoinformatics
Select four of these courses:

GEOG:3010 – Geographic Information Systems and Science

GEOG:3500 - Introduction to Environmental Remote Sensing (Fall)

GEOG:3520 - GIS for Environmental Studies (Fall)

GEOG:3570 - Light Detection and Ranging (LiDAR): Principles and Applications (Spring)

GEOG:4150 - Health and Environment: GIS Applications (Fall)

Health Informatics

Select four of these courses:

EPID:4400 – Epidemiology I (Fall and Spring)

CS:4470 – Health Data Analytics (Spring)

BIOS:5120 - Regression & ANOVA in Health Sciences (Spring)

IGPI:5220 - Public health informatics (Fall)

BIOC:3310 – Practical Data Science & Bioinformatics (Spring) (recommended for students with biology backgrounds)

BIOL:4213 – Bioinformatics (Fall)

BME:5320 – Bioinformatics Techniques (Fall) (recommended for students with biology backgrounds)

Human-Computer Interaction

PSY:3060 – Visual perception and cognition (Spring, may not be offered every year) or another cognitive psychology course approved by the Program Director

PSQF:6243 - Intermediate Statistical Methods (Fall and Spring) or another statistics course focused on methods relevant to experimental design and analysis approved by the Program Director

Select one of the following:

ISE:6211 – Human factors in healthcare systems

ISE:6220 – Cognitive Engineering

Another approved HCI elective in consultation with Director (e.g., Topics II courses in CS)

Select one of the following:

CS:4510 – Human-Computer Interaction for Computer Science (Fall) (if student has not taken CS:2520 and has not taken CS:4510 for the core)

CS:4500 – Research Methods in Human-Computer Interaction (Fall) (if student has not taken CS:4500 for the core)

Health Informatics MS/PharmD

The purpose of this dual degree is to provide an opportunity for professional students in the UI College of Pharmacy to receive formal training in Health Informatics in addition to training in pharmacotherapy and healthcare. Students completing the dual degree will receive an M.S. non-thesis in Informatics (Health Informatics – Pharmacy) from the Graduate College and a PharmD from the College of Pharmacy. Students will develop special expertise in information technology, including management of

electronic health records, health information exchange standards, electronic prescribing, medication management, decision support, and other competencies.

The Health Informatics MS/PharmD in informatics requires a total of 34 semester hours beyond the bachelor's degree. A total of 19 semester hours of core courses are required (shared with the Ph.D.), with an additional 6 semester hours of courses from the Health Informatics cognate above, and 9 semester hours from the PharmD curriculum to be cross-counted and selected from:

- PHAR:8209 IPPE Hospital (3 s.h.) (Fall)
- PHAR:8250 Applications Pharmacy Practice I (1 s.h.) (Fall)
- PHAR:8255 Discovery II: Design and Methods (1 s.h.) (Fall)
- PHAR:8265 IP: Applications of Pharmacy Practice II (1 s.h.) (Spring)
- PHAR:8374 Applications Pharmacy Practice III (1 s.h.) (Fall)
- PHAR:8375 Advanced Topics in Health Services (2 s.h.) (Fall)
- PHAR:8378 Pharmacy Law and Ethics (2 s.h.) (Spring)

Final Semester/Graduation

Besides the Application for Degree, MS students must complete a Non-Doctoral Plan of Study Summary Sheet, found on the Graduate College website, with the help of the Academic Services Coordinator and filed by the appropriate deadline.

Academic Registration Requirement

The Graduate College has explicit residence requirements that must be satisfied in order to obtain the MS. Of the minimum 31 semester hours required for the degree, at least 24 semester hours must be completed after admission to a UI graduate program. Various forms of extramural registration may qualify toward fulfillment of the aforementioned 24 semester hours residence requirement. See the Manual of Rules and Regulations of the Graduate College, Section X (D), and Section II (G).

Academic Standing

Students must maintain a minimum 2.75 grade point average to remain in good standing with the Graduate College. Falling below that level will result in academic probation at the collegiate level. The Department requirements are more stringent -- MS students must maintain a grade point average of 3.00 and must demonstrate academic progress towards the degree. A student placed on departmental probation for failing to maintain a minimum cumulative GPA of 3.00 shall be given a written explanation of the reasons for this action, along with a reasonable time-period (typically one year) within which the student shall take corrective action or be dismissed from the graduate program. For details, see the Manual of Rules and Regulations of the Graduate College.

A policy defining procedures to be followed in the dismissal of students from graduate programs has been approved by the Board of Regents, and are contained in the Manual of Rules and Regulations of the Graduate College; found on the web.

MS Plan of Study Form

Each student is responsible for maintaining an up-to-date MS Plan of Study document on file with the Academic Services Coordinator. The MS Plan of Study is used to track student progress throughout the program, and should be updated each semester in collaboration with the student's advisor. It is also

used to complete the Graduate College's Plan of Study summary document when preparing for graduation.

Petitions

Students may submit petitions to the Director of Graduate Studies for deviations from the requirements outlined here. The petition form is available online.

Certificates

There will be one generic informatics certificate consisting of the 19 semester hours of core courses for the Ph.D..

Academic Integrity

Work outside the classroom on assignments and programming projects plays a particularly important role in the learning process in informatics. It is essential that each student's work reflect his or her own effort. Our program treats cheating seriously. Instructors retain considerable latitude in the penalties they may invoke. For a first offense, an instructor can fail the student in the course. For a second offense, the program can expel the student. All offenses must be reported to the Director of Graduate Studies. Students involved in research should understand that it is essential to give proper credit for other people's ideas and work when they present them in their own writing. The University's policy on ethics in research is included in Chapter 27.6 of the Operations Manual and should be thoughtfully considered by any student undertaking research.

Committees

Executive Committee

The Executive Committee sets overarching agenda and policy for the Program. The Executive Committee meets approximately once per semester, and more often as necessary, to review and discuss issues of general program importance. It is composed of the Program Director and at least three other members of the Program faculty, appointed by the Program Director. Each of these appointed members should be from a different home department. Initial appointed members will serve 1, 2, and 3-year terms respectively, with future appointments being for 3-year terms such that only one appointed member changes each year.

Student Recruitment and Admissions Committee

The Student Recruitment and Admissions Committee is responsible for all activities related to recruitment and admissions. A major function is the annual review of applicants, admission recommendations, and recommendations for nominations for special fellowships. Another vital function is participation in recruitment efforts, such as planning advertising. The Committee meets frequently during admissions "season" (about once every two weeks during the December-through-March period), and on a couple of other occasions throughout the year. The committee is composed of the Program Director and three core faculty members, appointed by the Executive Committee. Each of these appointed members should be from a different home department. Initial appointed members will serve 1, 2, and 3-year terms respectively, with future appointments being for 3-year terms such that only one appointed member changes each year.

Graduate Studies Committee

The Graduate Studies Committee is responsible for advising students, for monitoring student progress in the Program, and for timely identification of students who are not making reasonable progress. The mission of the committee is to enhance the graduate student experience and facilitate successful and timely completion of Program degrees. The committee monitors principal facets of student progress, including coursework, thesis and research progress, and career development.

One key responsibility includes reviewing the progress of all Ph.D. students at the beginning of each Fall semester and communicating with them through a formal letter stating expectations for the current academic year. Another key responsibility is to monitor program curricula ensuring its continued relevance, quality, and availability. Changes to curricula should be made in direct consultation with Departments teaching key courses. There should be a yearly review of core courses to ensure they meet learning outcomes resulting in an annual summary report.

The Graduate Studies Committee is comprised by at least three core faculty members who represent the diverse topics and expertise of the Program, each from a different home department, appointed by the Executive Committee, together with the Program Director. The size of the committee could increase according to program size. Initial appointed members will serve 1, 2, and 3-year terms respectively, with future appointments being for 3-year terms to minimize yearly turnover.

Faculty Membership

Core Faculty

Core faculty membership is reserved to members of the Graduate faculty. Core faculty members are expected to advise program students, serve as instructors in core courses, and participate in the program's committees. They also have voting rights on faculty membership.

Initial core faculty membership in the program will be offered to all faculty who have advised an informatics graduate student, taught a required course, or conducted significant service for the program during the past five years.

Appointments are for three years, ending at the end of the academic year. Core faculty membership for expiring appointments will be reviewed by the Executive Committee. To maintain membership, it is expected that faculty accomplish the following in the previous five years:

1. Participate in two of the following:
    a. Advise an Informatics graduate student.
    b. Serve as an instructor in a required course.
    c. Be a member of one of the program's committees (i.e., executive, student recruitment and admissions, graduate studies).
2. Participate in two of the following:
    a. Serve on an informatics graduate student's examination committee.
    b. Give a talk to informatics graduate students.
    c. Provide professional training to informatics graduate students.
    d. Attend a faculty meeting.

Core faculty members who plan to be less involved in the program may request to become affiliate faculty instead by contacting the Director of Graduate Studies.

Affiliate Faculty

Affiliate faculty membership is reserved for adjunct, instructional, clinical, research, and tenure-track faculty. Affiliate faculty membership is also for three years (ending at the end of the academic year) and expiring appointments are reviewed by the Executive Committee. Continued membership requires participation in two of the items under #2 or one of the items under #1 above in the previous five years. An affiliate faculty member may request a change to become a core faculty member at any time through the Program Director. The Program Director will present the request to the core faculty and a positive endorsement of 60 percent of responding faculty will be required for a change in status.

Applying to Become a Faculty Member

Criteria for new faculty membership includes having an interest in informatics and either teaching informatics courses or having an active research program in informatics. Interested faculty should contact the Program Director who will discuss the appropriate level of membership. If the Program Director approves, the application will move forward and consist of a letter of intent describing the applicant's background in informatics and a curriculum vitae or biosketch submitted to the Program Director. The Program Director will distribute application materials to the core faculty and a positive endorsement of 60 percent of responding faculty will be required for membership. A last step required step is a letter of support from the faculty member's DEO, which will then be forwarded to the Graduate College together with the recommendation for membership. A faculty's membership is reviewed every three years.