

Graduate Program in Health Informatics Student Handbook for

*Master of Health Informatics (MHI)
Master of Science, Plan A and Plan B (MS)
Doctor of Philosophy (PhD)*

*Institute for Health Informatics
Academic Health Center
University of Minnesota*

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The information in this handbook and other university catalogs, publications, or announcements is subject to change without notice. University offices can provide current information about possible changes.

General Information

This handbook includes important and official information about the graduate program in Health Informatics. The information found in this guide is specific to the Health Informatics program and is intended as a resource for new and existing students. The handbook is the primary source of information about the rules and regulations concerning the program, and it also outlines general Graduate School requirements. Further details about the Graduate School's rules and procedures are on the Graduate School's website, www.grad.umn.edu. Your advisor, the Director of Graduate Studies (DGS), IHI staff and faculty, the BMHI website, www.bmhi.umn.edu, and the university's policy library, www.policy.umn.edu/ are all excellent resources for other questions you may have.

Organization

The Health Informatics (HINF) graduate program is housed within the Institute for Health Informatics (IHI). The terms "Health Informatics graduate program" (sometimes just "graduate program") and "IHI" may be used interchangeably. However, strictly speaking, the graduate program refers to the actual degree-granting program. The IHI refers to the administrative entity or "department" that supports the graduate program and the location of that entity. (The IHI is technically an interdepartmental institute, not a department, but for the purposes of University forms, use IHI for department fields.) HINF is also used as the course designator (e.g. HINF 5436 is the course designator for seminar). The IHI is part of the Office of Biomedical and Health Informatics (BMHI) in the Academic Health Center (AHC).

What is my...

Degree- MHI, MS, or PhD

Major- Health Informatics

Department- Institute for Health Informatics

College- AHC-Shared

Space

The IHI, located in 330 Diehl Hall, is open from 7:30am-4:30pm Monday through Friday. With the exception of seminar, all classes that take place on campus will meet in our large conference room, 330B. The IHI is equipped with quiet study space, group study space (known as the Collaboratory), conference rooms, desktop computers, a refrigerator, a microwave, and free water, coffee, and tea. We encourage students to use the space and to get to know the people who work in the IHI. Students may request after-hours access on the IHI intranet: <https://ihiweb.ahc.umn.edu/cgi-bin/ihi.cgi>, and computer access through the Data/File Server Access Request found at www.health.umn.edu/facultystaff/ahcis/forms/index.htm. See Appendix A for a sample of the Data/File Server Access Request.

People and Organization

The program has a diverse faculty drawn from multiple departments and divisions throughout the University of Minnesota. The Director of Graduate Studies (DGS) is responsible for the ongoing operation of the program. The DGS reports to the IHI Director for all academic matters. The Academic Health Center Office of Education oversees the graduate program through the AHC-Shared Collegiate

Unit. The Graduate School provides support and assistance with admissions, student progress, and the granting of degrees.

Director of Graduate Studies (DGS)

The DGS is appointed by AHC-Shared after consultation with the IHI Director and Health Informatics graduate faculty, and is responsible for administering all aspects of the graduate program, including student recruitment, admissions, student progress evaluations, student support services, curriculum design and implementation, program quality improvement, and the preparation of all required reporting. Students seeking advice about the program or experiencing any procedural difficulties should contact the DGS. In addition to the above, the DGS:

1. Acts as or assigns an initial advisor to each student at program entry.
2. Is responsible for all HINF graduate courses including:
 - a. Assigning teaching responsibilities
 - b. Scheduling classes
 - c. Selecting teaching assistants
 - d. Monitoring course quality
3. Reviews, approves, and signs required forms (e.g. GDP, PWE, final exam, etc.).
4. Chairs the Graduate Executive Committee (GEC).
 - a. Oversees the application and admissions process for the program
 - b. Oversees annual review of each student's progress in the program
 - c. Reviews and recommends all actions related to student progress including probation and dismissal from the program
 - d. Approves and recommends requests for waivers and exceptions to program and University rules
5. Designates Preliminary Written Examination (PWE) committee membership for PhD students
6. Reviews and approves all official communications to students regarding the graduate program

Graduate Executive Committee (GEC)

The GEC consists of the DGS, who chairs the committee; three to five graduate faculty members, named by the IHI Director; and an elected student representative. The GEC oversees the operation of the graduate program and helps to ensure that students have access to the highest quality educational experience.

The GEC:

1. Reviews applicants and recommends students for admission into the program
2. Routinely reviews the Health Informatics curriculum and makes formal changes as needed
3. Reviews elective courses and makes recommendations to students
4. Reviews the recommendations of the DGS concerning student progress to ensure that students are making acceptable progress
5. Makes decisions, upon recommendation of the DGS, regarding academic probation, misconduct, and dismissal

6. Makes recommendations to the graduate faculty concerning major curriculum changes and changes in program policies

Graduate Faculty

Faculty members in the IHI serve in at least one of the following ways: advising, student committee membership, teaching, providing internship or project experiences, research, and service. There are several types of faculty associated with the Institute for Health Informatics and the Health Informatics graduate program. However, students only need to understand the following distinctions and classifications:

1. Only “Graduate Faculty” may advise or serve on student committees.
2. All “IHI Core Faculty” are “Graduate Faculty”.
3. Many, but not all, “Affiliate Faculty” are also “Graduate Faculty”.

For a complete list of Health Informatics Graduate Faculty and roles they may take, see the Graduate Education Faculty Role List, https://apps.asr.umn.edu/faculty_roles. For all Core and Affiliate Faculty bios, see the faculty page of the BMHI website, www.bmhi.umn.edu/ihi/people/index.htm.

Staff

The IHI support staff members answer questions and assist current and prospective students. They are often the first points of contact, and they are quite knowledgeable concerning both program and university rules and procedures. The Academic Programs Manager, also known as the Plan Level Coordinator (PLC), works closely with the graduate program, and is a resource for students during every step in a student’s academic career. The staff also provide support for the work of the DGS and the GEC, and are able to schedule meetings for the DGS.

Expectations

Conduct

University of Minnesota Student Conduct Code

All students enrolled in the Health Informatics graduate program must adhere to and comply with the Student Conduct Code, www1.umn.edu/regents/policies/academic/Student_Conduct_Code.html, which is administered and enforced by the Office of Student Conduct and Academic Integrity (OSCAI), www.oscai.umn.edu/. When a student violates or allegedly violates the Student Conduct Code, the Health Informatics graduate program will report the student to OSCAI and will defer to their process for dealing with all such incidents.

Academic, Ethical, and Professional Responsibilities

Health informatics professionals and professionals-in-training are held to high academic, ethical, and professional standards since they frequently deal with confidential information pertaining to human health. For the purposes of the following, violations of these standards are all grouped under the term

Academic Misconduct and are grounds for dismissal from the University of Minnesota Graduate Program in Health Informatics. Examples of ethical misconduct include, but are not limited to, plagiarism, lying, cheating, theft, violating security rules, violating confidentiality, and violating Institutional Review Board guidelines during research.

For more information, see the University Academic Misconduct Policy,

http://regents.umn.edu/sites/default/files/policies/Academic_Misconduct.pdf.

See also Mutual Responsibilities for Graduate Education at the University of Minnesota:

www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPD.html.

All students enrolled in the Health Informatics graduate program for any of the three degree objectives must be familiar with the document “Code of Conduct for Graduate Students in Health Informatics”, [Appendix B](#). All students must sign and date this document indicating that they have read, understood, and agree to it, including the consequences that may follow from behavior that does not fulfill the responsibilities listed. Students submit the signed code of conduct to the program staff prior to their first graduate class. Students who refuse to sign and submit the document in a timely manner are subject to having their admission to the program revoked.

Academic Misconduct Procedures

Students who allegedly commit an infraction by not fulfilling the ethical responsibilities outlined above, will be subject to the following disciplinary procedures separate and distinct from any other procedures required by the University of Minnesota. We have put these procedures in place to help maintain a sense of fairness to students and all others involved when there is an ethical infraction.

1. If the infraction involves a non-HINF course, the student will first be subject to the processes of the related department.
2. If the infraction involves an HINF online course, the student’s account will be frozen to preserve information potentially relevant to the charge, and a new account will be created so the student may continue his or her work until the issue is resolved.
3. The HINF course director will document the alleged infraction by:
 - a. Obtaining and assembling copies of all relevant materials in printed form
 - b. Preparing a description of the exact nature and extent of the alleged violation
 - c. Describing the recommended course of action
4. The HINF course director will offer the student the opportunity to respond to the allegation of an infraction.
5. If the HINF course director is satisfied with the student’s explanation and decides that the matter has been resolved, no further action will be taken. The student’s online account will be unfrozen, and nothing will be included in the student’s record.
6. If the HINF course director determines that the infraction likely has occurred, he or she will submit the Report Form for Academic Misconduct to OSCAI.
7. The case will be referred to the Graduate Executive Committee (GEC) for further consideration by one of the following mechanisms:

- a. The HINF course director copying the form to the DGS
 - b. OSCAI notifies the GEC that a complaint has been filed
 - c. The collegiate unit where the infraction has allegedly been committed notifies the GEC
8. Upon notification, the HINF course director will notify the student in writing of the alleged violation and its referral to the GEC for consideration.
9. If the student requests a hearing, by notifying the DGS in writing no more than 30 days after the date of the written notice, the following will apply:
 - a. The DGS will expeditiously schedule a time and place for a GEC hearing.
 - b. The DGS will notify the student, in writing, of the date and place of the hearing at least ten (10) days before the scheduled date.
 - c. Students who are the subject of the hearing may examine the complaint and their student file prior to and at the hearing.
 - d. Students may present their own case, including the testimony of others, regarding the allegation.
 - e. At least two-thirds of the GEC must be present to conduct the hearing.
 - f. Students may challenge the presence of any member of the GEC whose objectivity they feel is in question. The GEC will consider and rule on those challenges.
 - g. The GEC will review the case to determine if program action is necessary. Any members of the committee who are involved in filing the complaint or advise the student involved in the allegation, will recuse themselves. If there are sufficient recusals for a given case to reduce the number present to less than two-thirds of the GEC, additional graduate faculty members will be selected to replace those recusing themselves.
10. The committee will deliberate in executive session and make a recommendation concerning the case. That recommendation may include any of the following:
 - a. The student is not guilty of the violation, and the case is closed.
 - b. The student is found to be guilty, and one or more of the following is imposed:
 - i. Course sanctions (e.g. a grade change)
 - ii. Remedial study/actions (e.g. prepare a written report)
 - iii. Reprimand (e.g. a formal letter in the student's permanent file)
 - iv. Academic probation
 - v. Academic suspension
 - vi. Dismissal
11. The DGS will notify the student in writing of the GEC's decision and an explanation of the reasons for that decision.
12. Students have the continuing right to file a written appeal to the GEC based on new information or evidence that was not available at the time of the decision.
13. Students have the right to file a written appeal of the decision with the graduate faculty within two weeks of receiving the decision from the DGS.
14. Students have the right to appear before the graduate faculty to present an appeal if they so choose. They must indicate their desire to present an in-person appeal to the graduate faculty within two weeks of formal notification.

15. The DGS must then schedule a meeting of the graduate faculty to hear the appeal within the 30 days of receiving the appeal request.
16. If a student chooses to appeal the decision, the graduate faculty will review and determine the action based on the accumulated evidence and the student's appeal. They may accept the appeal and modify or reject the recommendation in its entirety, or they may reject the student's appeal, all by a majority vote.
17. At the conclusion of this process, students have the right to file an appeal with the Graduate School or the corresponding body at the university-level that handles these matters.

Student General Rights of Appeal

Students desiring to appeal a decision of the Health Informatics graduate program may do so by preparing a letter of appeal and submitting it to the DGS. The letter should state the specific reasons that the decision should be overturned and if applicable, any steps that the student will take in response to the decision. The DGS will transmit the appeal to a graduate faculty committee for their consideration. If the graduate faculty of the program does not uphold an appeal, the student may then appeal this decision to the Graduate School of the University of Minnesota.

Progress

We expect all students to make steady and consistent progress toward their degrees and to maintain a satisfactory GPA (2.8 for MHI students, 3.0 for MS and PhD students). The GEC evaluates "steady and consistent progress" based on the apparent ability to complete the program within the required number of years. (See the table on the next page for the requirements for each degree). Students who are unable to complete the program within this timeframe may petition the program for an extension of up to 12 months (MHI and MS) or 24 months (PhD). The program reserves the right to terminate students who fail to complete the program within the required time limits

Maintaining active student status

All students are required to register every fall and spring semester in order to maintain active status in the program. Students do not need to register in the summer. If students do not register in a given semester, the Graduate School will automatically deactivate them from the program in that semester. We do recognize that there are exceptional circumstances that may interrupt degree progress. Students who are not able to maintain active status are strongly encouraged to consult with the DGS, their advisor(s), and relevant offices to determine the appropriate course of action.

GRAD 999 and FTE Registration

Students, with DGS approval, may register for GRAD 999 in order to maintain active status without registering for any courses. GRAD 999 does not satisfy the requirements for international students, TAs, RAs, and others who must be enrolled full-time. Students may need to enroll in full-time equivalency (FTE) credits in order to meet these requirements. TAs and RAs should contact the Graduate Assistant and Student Employment Programs Office, gaesinfo@umn.edu, and international students should contact the International Student and Scholar Services (ISSS) office, www.issss.umn.edu, for more information.

There are limits to the number of times students may register for GRAD 999, so please plan accordingly. The program may grant exceptions to this policy when circumstances warrant; however, if you plan to be gone for several semesters, a leave of absence may be a better choice.

	Part-time MHI	Full-time MHI	MS	PhD
How long do I have to complete my degree?	5 years	2 years	5 years	8 years
When may I start taking GRAD 999?	Second semester	All courses except capstone must be completed	Second year	Second semester
How many times may I take GRAD 999 before I start my final project or thesis?	2	0	6	1
How many times may I take GRAD 999 after I start my final project or thesis?	2	2	4	6
How many times may I register for GRAD 999 total?	4	2	6	6

Leave of Absence

Students with advisor, DGS, *and college* approval may request a leave of absence for up to two academic years. Students must complete a Leave of Absence Request form that specifies the term(s) and year(s) of the leave. They must complete a Leave of Absence Reinstatement Request form and enroll in classes no later than the term immediately following the expiration of the leave (excluding summer). Colleges may specify reasonable conditions for reinstatement to active status, whether the student returns early or at the expiration of the leave. They may also deny reinstatement if the student engaged in crimes or other serious misconduct occurring during the leave that would have been grounds for suspension or expulsion had the student been active. For the complete policy and links to the forms, please search for leave of absence in the university's policy library, www.policy.umn.edu/.

Express Readmit

Students who do not enroll in a given fall or spring semester and are therefore deactivated and removed from the program, may be eligible for an Express Readmit if they have DGS approval. This option is only available for applicants returning to the exact same major program to pursue the exact same degree. There is a \$75 fee associated with the Express Readmit, but this is generally waived for applicants who were registered for the previous term, but neglected to register in the current term. See the Grad School

Admissions website, www.grad.umn.edu/admissions, for more information and for the link to the Express Readmit Application.

Annual Progress Letters

The GEC reviews each student's academic progress on an annual basis to determine if that progress is acceptable and meets the program's criteria. Students will receive a letter describing their progress and any concerns the GEC has. If students are not making adequate progress or are not maintaining the required GPA, the GEC has the authority to place them on academic probation. The progress letter will outline reasons for probation, necessary steps to be taken off probation, and consequences of not completing the steps (usually dismissal from the program). Students who have been taken off probation are still subject to dismissal if they stop making progress or their GPA falls below the minimum again. Students should discuss the contents of their progress letter with their advisors and the DGS.

Degree Requirements

Master of Health Informatics (MHI)

The MHI is a 30-credit professional degree that may be completed in as little as one calendar year or up to five years. Be aware that we only recommend the one year option to highly motivated students who can handle a 14-15 credit course load each semester, or who have many transfer credits. Most full-time students will require at least three full semesters. The MHI is intended for working professionals and others who would like training in understanding, implementing, evaluating, and applying the many information technologies becoming more prevalent in the health care industry.

The MHI program trains students in the following competencies:

1. Knowledge of the breadth and depth of information technology in health care
2. Knowledge of the methods of decision support in health care
3. Knowledge of the legal, ethical, and security issues in the use of information in health care
4. Understanding the role and function of data communications in health care
5. Use of technologies to disseminate and collect health-related information
6. The ability to design and build a database application that will support health care using a systematic software engineering process
7. The ability to develop an information technology solution to a problem in health care using methods of systems analysis
8. The ability to design and carry out a project to evaluate the impact and success of introducing an information system into a clinical environment

Advising

In order to ensure that all MHI students have the best possible educational experience, we have developed a dual-advisor policy to create a personal, professional advising system that meets the needs of each of our students. The Director of Graduate Studies (DGS), with the help of IHI staff, will provide academic advising concerning coursework and related matters. This is why the DGS appears as your advisor when you first enroll in the program. Academic advisors provide advice to all students in selecting coursework that meets their degree requirements, and they provide assistance in developing a Graduate Degree Plan (GDP) that meets students' academic goals. This academic advising will be in consultation with the student's Degree Project Advisor to the extent necessary and desired.

The Capstone Course Director serves as the initial Degree Project Advisor for all MHI students. Other HINF graduate faculty members may advise the Capstone project if the designated faculty member selected by the student agrees to take on the responsibility and the DGS and Capstone Director approve the change. In order to advise alone, the selected faculty member must have previously advised an MHI Capstone project. If this is not the case, the Capstone Course Director will act as a mentor to the advisor. The Capstone Course Director has the right to contact HINF faculty members in order to encourage them to work with specific MHI students.

Required courses

Course	Credits	Semesters offered	Notes
Health Informatics I HINF 5430	3	Fall	
Health Informatics II HINF 5431	3	Spring	
Health Informatics Seminar HINF 5436	1	Fall Spring	Must take twice
Applied Health Care Databases HINF 5510	3	Fall	
Clinical Informatics and Patient Safety HINF 5520	2	Spring	
Health Care Analytics and Data Science HINF 5531	2	Spring	
Interprofessional Health Informatics HINF 5540	2	Fall	
Capstone Project HINF 5499	3	Fall Spring Summer	
Biostatistical Methods I PUBH 6414	3	Fall Spring Summer	Contact the School of Public Health for a permission number

In addition to the required courses, the program includes seven elective credits. We encourage students to fulfill these elective credits by taking courses that correspond to their interests, whether they be in statistics, epidemiology, health services research, computer science, biomedical engineering, decision science courses, or another related field. See [Appendix D](#) for a list of recommended elective courses. Students may use their elective courses to declare a formal minor. If students choose to undertake a formal minor, they must meet all of the requirements of the program offering the minor.

Transferred and Waived Courses

MHI students may transfer up to 12 graduate credits combined from any regionally accredited university and non-degree credits from the University of Minnesota. All transfer credits must meet the program requirements and be approved by the advisor and the DGS. Students may double-count up to eight credits from another University of Minnesota master's degree. First professional degrees (e.g. MD, DDS, PharmD, DVM, JD, etc.) count as transfer credits and may not be double-counted. Students must list transferred and double-counted courses on their Graduate Degree Plan (GDP) in order to get credit.

Students also have the option of waiving required courses if they have taken other courses that meet program requirements. The DGS must approve all waivers. Students who have courses waived will have to take an equal number of elective credits in order to earn a total of 30 credits in the program.

Forms

MHI students must complete three paper forms during the course of the program: the Graduate Degree Plan (GDP), the Graduate Application for Degree, and the Final Report. The Application for Degree and the Final Report form are part of the Graduation Packet. Other forms may be necessary to ask for exceptions to general graduate program rules or to request a leave of absence. Links to the GDP and forms for special circumstances are on the Graduate School website at www.grad.umn.edu/students/forms/masters.

Graduate Degree Plan (GDP)

MHI students list the 30 credits they will use for their official degree on the Graduate Degree Plan (GDP). The advisor(s), DGS, minor DGS (if applicable), and College Coordinator (CC) must all sign the GDP before the Graduate School processes it. Students are responsible for getting their advisors' and minor DGS' signature and then submitting the GDP to the Plan Level Coordinator (PLC). The PLC reviews GDPs for accuracy and completion of degree requirements and obtains the DGS' and CC's signatures. The CC sends the completed GDP to the Graduate School for processing.

The GDP is for the most part self-explanatory, but there are a few things to keep in mind.

1. You may not be able to save information typed into the fields on the GDP. Test this before you spend lots of time completing the form.
2. The name field must be identical to your official university listing.
3. For the MHI degree, check the Master's Plan C box.
4. HINF does not have a language requirement.
5. HINF courses taken for non-degree credit count as "major" courses in the transfer work section. All other transfer work is "other".
6. A maximum of one-third of the credits listed on the GDP may be taken S/N.
7. You must have a 2.8 cumulative GPA with no grades below a C- listed on the GDP.
8. You may list courses you have yet to take on the GDP. If you need to change your GDP at a later date, you will need to submit a petition and possibly a new GDP.
9. HINF courses are "major" courses; all other courses are "other" courses regardless of requirements.
10. Do not include GRAD 999 or HINF 8333 (FTE).

We will put a hold on the record of any students who have not submitted the GDP in the semester before they plan to graduate. This is because students cannot request a graduation packet until the Graduate School has processed their GDP. Please plan accordingly. See [Appendix E](#) for recommended submission dates.

Graduation Packet

The graduation packet contains the Application for Degree and the Final Report. Students must request the graduation packet online at www.grad.umn.edu/students/masters. Forgetting about the graduation packet is the *most common mistake* students make. It can have a *profound impact* on when they are able to graduate. See [Appendix E](#) for recommended packet request dates, and keep the following in mind:

1. MHI students cannot request a grad packet until the Graduate School has processed their GDP.
2. Only students who have requested the grad packet may participate in commencement.
3. The Graduate School mails packets directly to students' homes, which may take several weeks.
4. The first form in the GDP is due on the first day of the intended month of graduation.
5. The second form in the GDP is due on the last day of the month of graduation.
6. Students will not be penalized for submitting their forms early. If circumstances change, and they are not able to graduate in the intended month, the Graduate School will just enter the new month for graduation. Students will not have to submit new forms.

Students are responsible for signing and submitting the Application for Degree to OneStop Student Services by the first day of the intended month of graduation. The DGS needs to sign the Final Report form, which is due to the Graduate School on the last business day of the month of graduation. The DGS will not sign the form until all grades are entered, including the Capstone Project grade. Keep your month in mind when determining a Capstone Project due date with your project advisor.

Capstone Project

The Capstone Project is *not* a thesis.

The program includes a three-credit Capstone experience in which students will have a final opportunity to apply their newly acquired knowledge and skills to a project involving a practical problem in health informatics. Students will learn how to design these projects properly, reviewing past exemplary projects as guides. Then, with the help of their degree project advisor or informal mentor and the Capstone course director, students will design and carry out their own projects. These can take a variety of forms, including: developing design and evaluation specifications for software to address a specific health care need; working on, observing, analyzing, and reporting the actions of a team involved in implementing a new information system; or observing and measuring the impact of such a system in a health care setting. Internship experiences or a systematic review of topical literature also constitute suitable Capstone Projects. Students will submit a written project report in lieu of a final examination. The Capstone Project coordinator will assign a grade to the report and may consult the student's project mentor in doing so. In cases where a formal degree project advisor other than the Capstone Project coordinator has been designated, that person will assign the grade.

The MHI Capstone Project is a required independent informatics experience, self-selected to fulfill one or more objectives of the MHI Program. MHI students normally will register for HINF 5499, 3 credits, during their last semester when essentially all of the coursework listed on the Degree Program form will be completed. Students should already have submitted their Graduate Degree Plan (coursework only) to

the DGS and Graduate School. Students then meet with the Capstone Coordinator, separately or together as a group, to determine readiness to start and finish their Capstone Projects.

The Capstone process involves:

1. Identifying a site, a project goal, and a degree project advisor or informal mentor in that setting who will supervise the student's work. While it is encouraged, a mentor does not have to have any formal affiliation with the IHI or the HINF Graduate Faculty.
2. Fulfilling any data or site-specific regulatory requirements, e.g. Institutional Review Board (IRB, University of Minnesota **plus** User Site), Health Insurance Portability and Accountability Act (HIPAA), and/or user-system training.
3. Submitting for approval by the degree project advisor or Capstone coordinator and mentor a 1-2 page Capstone Project Proposal indicating:
 - a. Title
 - b. Short problem description
 - c. Brief listing of related work by others, as a bibliography
 - d. A project plan consisting of a bulleted list of activities and a timeline for completion with one or more intermediate milestone(s).

The entire Capstone Project should take no more than 100 hours, plus 20 hours to compose and write the Capstone Report, estimated at 15-30 numbered pages. The capstone report should be prepared according to the following guidelines. This includes a cover page with your name, project title, date, HINF/MHI program, and signatures of the degree project advisor or Capstone coordinator and mentor. See [Appendix F](#) for the cover page template.

1. Use scientific report format (may include):
 - a. Abstract
 - b. Problem statement
 - c. Rationale and framework of solutions
 - d. Background/Review of literature
 - e. Methods and models
 - f. Results and evaluation
 - g. Discussion
 - h. Conclusion and next steps
 - i. Acknowledgements
 - j. Bibliography using a standard format (e.g. Vancouver, APA, NLM, IEEE/ACM, etc.)
 - k. Appendices if needed for documentation
2. A separate one-page reflective assessment of the Capstone Project should be submitted with the Report, discussing these questions:
 - a. What MHI objectives were addressed with the Capstone Project?
 - b. How were Capstone objectives achieved; how did you know?
 - c. What informatics skills and qualifications were practiced?
 - d. What informatics contribution does the Capstone demonstrate?

- e. If IHI-funded, how does this work fit with your selected role?
- f. What career goal is anticipated in the future?

Master of Science (MS)

The MS is a 42-credit degree that may be completed in as little as two years or up to five years. The MS is intended for students who are interested in research, but who do not have the background or are not ready to commit to the PhD program. Currently, only students already enrolled in the program are eligible to apply for the MS. Applicants will need to apply through the Graduate School and Apply Yourself using a change of status application, found at www.grad.umn.edu/admissions/cos/index.html.

There are two kinds of MS degrees: MS Plan A and MS Plan B. The Plan A culminates in a substantial, 10-credit master's thesis. The Plan B culminates in a smaller, 4-credit Plan B project. Electives comprise the additional six credits in the Plan B degree. Students do not need to select a plan until they submit their [Graduate Degree Plans \(GDP\)](#).

Advising

In order to ensure that all MS students have the best possible educational experience, we have developed a dual-advisor policy to create a personal, professional advising system that meets the needs of each of our students. The Director of Graduate Studies (DGS), with the help of IHI staff, will provide initial academic advising concerning coursework and related matters. This is why the DGS appears as your advisor when you first enroll in the program. Academic advisors provide advice to all students in selecting coursework that meets their degree requirements, and they provide assistance in developing a Graduate Degree Plan (GDP) that meets students' academic goals.

A graduate faculty member will advise the Plan A thesis or Plan B project. These project advisors will be the official advisors of record. Depending on their familiarity with the program and its requirements, project advisors may also provide academic advising, but the DGS and staff are always available as resources. Advisors must be graduate faculty in the HINF graduate program, and may not serve as external members on the master's committee, see below. Only the PLC is able to change students' advisors in the University system, so students must notify the PLC when they have identified their advisors, even if it is the DGS. Students must have an advisor on record before they can submit their GDP.

Required Courses

Course	Credits	Semesters offered	Notes
Health Informatics I HINF 5430	3	Fall	
Health Informatics II HINF 5431	3	Spring	
Health Informatics Seminar HINF 5436	1	Fall Spring	Must take twice
Applied Health Care Databases HINF 5510	3	Fall	
Clinical Informatics and	2	Spring	

Patient Safety HINF 5520			
Health Care Analytics and Data Science HINF 5531	2	Spring	
Interprofessional Health Informatics HINF 5540	2	Fall	
Plan B Project/ Thesis Credits HINF 8770/ HINF 8777	4/10	Fall Spring Summer	
Biostatistics I PUBH 6450	4	Fall Spring	Contact the School of Public Health for a permission number
Biostatistics II PUBH 6451	4	Spring	Contact the School of Public Health for a permission number

Transferred and Waived Courses

Students may transfer up to 40% of their non-thesis credits from any graduate program at a regionally accredited university and non-degree credits from the University of Minnesota. All transfer credits must meet the program requirements and be approved by the advisor and the DGS. Of the 40%, no more than 12 credits may be from non-degree status. Students may double-count up to eight credits from another University of Minnesota master's degree. First professional degrees (e.g. MD, DDS, PharmD, DVM, JD, etc.) count as transfer credits and may not be double-counted. Students must list transferred and double-counted courses on their Graduate Degree Plan (GDP) in order to get credit.

Students also have the option of waiving required courses if they have taken other courses that meet program requirements. The DGS must approve all waivers. Students who have courses waived will have to take an equal number of elective credits in order to earn a total of 36 credits in the program.

Forms

MS students must complete three paper forms during the course of the program: the Graduate Degree Plan (GDP), the Graduate Application for Degree, and the Final Report. In addition, Plan A students must complete the Reviewer's Report Form. Other forms may be necessary to ask for exceptions to general graduate program rules and to request a leave of absence. Links to the GDP and forms for special circumstances are on the Graduate School website at www.grad.umn.edu/students/forms/masters.

Graduate Degree Plan (GDP)

MS students list the non-thesis credits they will use for their official degree on the Graduate Degree Plan (GDP). That means Plan A students will list 32 credits, and Plan B students will list 42 credits. The advisor(s), DGS, minor DGS (if applicable), and College Coordinator (CC) must all sign the GDP before the Graduate School processes it. Students are responsible for getting their advisors' and minor DGS' signature and then submitting the GDP to the Plan Level Coordinator (PLC). The PLC reviews GDPs for

accuracy and completion of degree requirements and obtains the DGS' and CC's signatures. The CC sends the completed GDP to the Graduate School for processing.

The GDP is for the most part self-explanatory, but there are a few things to keep in mind:

1. You may not be able to save information typed into the fields on the GDP. Test this before you spend lots of time completing the form.
2. The name field must be identical to your official university listing.
3. HINF does not have a language requirement.
4. Do not forget to check Plan A, Plan B and Master's Plan A thesis credits, as applicable.
5. HINF courses taken for non-degree credit count as "major" courses in the transfer work section. All other transfer work is "other".
6. A maximum of one-third of the credits listed on the GDP may be S/N.
7. You must have a 3.0 cumulative GPA with no grades below a C- listed on the GDP.
8. You may list courses you plan to take on the GDP. If you need to change your GDP at a later date, you will need to submit a petition and possibly a new GDP.
9. HINF courses are "major" courses; all other courses are "other" courses regardless of requirements.
10. Do not include GRAD 999, HINF 8333 (FTE), or HINF 8777 (MS Plan A thesis).

We will put a hold on the record of any students who have not submitted the GDP in the semester before they plan to graduate. This is because students cannot request a graduation packet until the Graduate School has processed their GDP. Please plan accordingly. See [Appendix G](#) (Plan A) or [Appendix H](#) (Plan B) for recommended submission dates.

Graduation Packet

The graduation packet contains forms that students need to complete their degrees and graduate. Students must request the graduation packet online at www.grad.umn.edu/students/masters. Forgetting about the graduation packet is the *most common mistake* students make. It can have a *profound impact* on when they are able to graduate. See [Appendix G](#) (Plan A) or [Appendix H](#) Plan B for recommended packet request dates, and keep the following in mind:

1. MS students cannot request a grad packet until the Graduate School has processed their committees.
2. Only students who have requested the grad packet may participate in commencement.
3. The Graduate School mails packets directly to students' homes, which may take several weeks.
4. The first form in the GDP is due on the first day of the intended month of graduation.
5. Students will not be penalized for submitting their forms early. If circumstances change, and they are not able to graduate in the intended month, the Graduate School will just enter the new month for graduation. Students will not have to submit new forms.

Plan A students' graduation packets contain:

1. Application for Degree
2. Reviewers' Report (exchange for the Final Examination Report)
3. Instructions for submitting the thesis

Students are responsible for signing and submitting the Application for Degree to OneStop Student Services by the first day of the intended month of graduation. They are also responsible for collecting committee members' signatures on the Reviewers' Report and submitting it to the Graduate School in exchange for the Final Exam Report and submitting the final exam report by the last day of the month of graduation.

Plan B students' graduation packets contain:

1. Application for Degree
2. Final Examination Report

Students are responsible for signing and submitting the Application for Degree to OneStop Student Services by the first day of the month of graduation. The committee signs the Final Exam Report after the student has passed the Plan B Project presentation. Students are responsible for submitting this form to the Graduate School by the last working day of the month of graduation.

MS Committees

In addition to an advisor, MS students need to select at least two faculty members to review the presentation of their final projects (either MS thesis or Plan B project) with the advisor. One committee member must be external to the HINF graduate faculty. Students who have declared a formal minor must include a representative from that minor as the external committee member. This person may be a member of the HINF graduate faculty as long as he or she also has an appointment in another graduate program and is serving as a representative from that program. Experts who do not have a graduate faculty appointment in the university may be able to serve as the external committee member, if there are no similar experts at the university. The program, college, and university all have to approve such appointments. Students interested in this option should discuss the situation with the DGS and email the PLC for more details. The other committee member(s) must be members of the HINF graduate faculty.

The Graduate School requires that MS students have a committee on file at least one month before their final project submission, but we recommend that students assign their committees as soon as it is reasonable. Students are able to change their committee members later if necessary. For further instructions or to assign or update a master's committee, see www.grad.umn.edu/students/assignmasterscommittee/index.html. For more information about committee member eligibility, see the Appointments to Graduate Examination Committees policy in the university's policy library, www.policy.umn.edu.

Plan A Thesis

As noted above, the Plan A master's culminates in a master's thesis. This thesis represents approximately 300 hours of work. Students work with their advisors and their committee members to determine an appropriate master's thesis topic. They should look beyond their courses, attend seminars, and read pertinent journals so they are well informed when they pick their thesis topic. Students must prepare a brief proposal (4-5 pages) that describes the intended project, which the committee must review and approve before students begin researching. The proposal should contain a research hypothesis, a statement of significance, background material, a current bibliography, a possible methodology to be used or developed, and the anticipated results.

Students will then register for thesis credits, research, and write their master's thesis. Students should discuss the length and level of detail of the thesis with their advisors. While it is beyond the scope of this handbook to attempt a comprehensive description of thesis efforts, the graduation packet includes formatting guidelines, and students may use the Plan A theses in the Collaboratory as reference.

After students finish writing their Plan A thesis, they must submit the thesis to their committee members for review. Committee members have 14 days to approve the thesis, by signing the Reviewers' Report form (part of the graduation packet), before students may defend their thesis. No later than the day before the defense, students must submit the signed Reviewers' Report form to the Graduate School and obtain the Final Examination Report form, which the committee members will sign after the defense.

Students are responsible for working with their committee members and IHI staff to schedule the thesis defense. MS defenses usually take two hours, but the committee is neither obligated to use all of that time nor to stop at the end of it. All members of the committee must be present for the defense in some form: face-to-face, videoconference or teleconference are all acceptable. Please note the Graduate School only accepts one faxed or scanned signature on the final report form. For more Graduate School requirements and recommendations related to remote committee members, see the appendix to the related policy:

www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html.

The committee will assign a grade of either pass or fail, determined by a simple majority. A grade of pass indicates that the student has successfully defended his or her MS Thesis. A grade of fail means that the work is rejected by the committee. Students who fail may retake the examination if all or all but one of the committee members approve. Failure on the second attempt will lead to dismissal from the program. In the event that the committee cannot make an immediate decision, the committee chair may call a recess. More information is available at

www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_PROC01.html.

After the defense, the PLC will copy the signed exam report and email it to the student. Students are responsible for submitting the original to the Graduate School by the last day of the month. Students

also have until the end of the month to submit the final draft of the thesis, according to the instructions included in the grad packet.

Plan B Project

As noted above, Plan B students must complete an independent project focused on a health informatics application, culminating in a written report. The general Graduate School requirement is that “students must demonstrate familiarity with the tools of research or scholarship in the field, the ability to work independently, and the ability to present the results of investigation effectively, by completing at least one Plan B project. The graduate faculty in each major field may require as many as three such projects, equivalent to approximately 120 hours of work.” Students should discuss the length and level of detail of the project with their advisors. While it is beyond the scope of this handbook to attempt a comprehensive description of Plan B projects, students may use the projects in the Collaboratory as reference.

Students are responsible for working with their committee members and IHI staff to schedule the Plan B oral exam. Oral exams usually take two hours, but the committee is neither obligated to use all of that time nor to stop at the end of it. All members of the committee must be present for the exam in some form: face-to-face, videoconference or teleconference are all acceptable. Please note the Graduate School only accepts one faxed or scanned signature on the final report form. For more Graduate School requirements and recommendations related to remote committee members, see the appendix to the related policy:

www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html.

The committee will assign a grade of either pass or fail, determined by a simple majority. A grade of pass indicates that the student has successfully finished the Plan B project. A grade of fail means that the work is rejected by the committee. Students who fail may retake the examination if all or all but one of the committee members approve. Failure on the second attempt will lead to dismissal from the program. In the event that the committee cannot make an immediate decision, the committee chair may call a recess. More information is available at

www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_PROC01.html.

After the defense, the PLC will copy the signed exam report and email it to the student. Students are responsible for submitting the original to the Graduate School by the last day of the month.

Doctor of Philosophy (PhD)

The PhD is a 70-credit degree designed for students seeking the highest level of advanced training in the area of health informatics. It is a degree where students apply their knowledge and skills to an original research project that they report in a doctoral thesis. After completing most or all of the required coursework students, in consultation with their advisors, will determine an appropriate time to take the Preliminary Written Examination (PWE). When they have passed the PWE, they will take the Preliminary Oral Examination (POE). Students who have passed both preliminary exams will be admitted to candidacy for the Doctor of Philosophy degree. Candidates undertake the research and writing activities that lead to the doctoral thesis. In order to earn a PhD, candidates must have their thesis approved by their reviewers, and must successfully defend it in a public oral defense.

Advising

In order to ensure that all PhD students have the best possible educational experience, we have developed a dual-advisor policy to create a personal, professional advising system that meets the needs of each of our students. The Director of Graduate Studies (DGS), with the help of IHI staff, will provide initial academic advising concerning coursework and related matters. This is why the DGS appears as your advisor when you first enroll in the program. Academic advisors provide advice to all students in selecting coursework that meets their degree requirements, and they provide assistance in developing a Graduate Degree Plan (GDP) that meets students' academic goals.

One or two graduate faculty members will advise PhD students with the PhD thesis. These advisors will be the official advisors of record. Depending on their familiarity with the program and its requirements, project advisors may provide academic advising, but the DGS and staff are always available as resources. Advisors must be graduate faculty in the HINF graduate program, and may not serve as external members on either the preliminary or the final exam committees. PhD advisors must have served on a PhD Final Examination Committee in either the Health Informatics graduate program, another graduate program at the University of Minnesota, or an equivalent doctoral program at another university. Furthermore, they must have advised a PhD student through to completion under the mentorship of a faculty member who is already qualified as a PhD advisor.

A student may change advisors if all faculty members involved agree. Only the PLC is able to change students' advisors in the university system, so students must notify the PLC when they have identified their advisors, even if it is the DGS. Students must have an advisor on record before they can submit their GDP.

Required Courses

Course	Credits	Semesters offered	Notes
Health Informatics I HINF 5430	3	Fall	
Health Informatics II HINF 5431	3	Spring	
Health Informatics Seminar	1	Fall	Must take twice

HINF 5436		Spring	
Applied Health Care Databases HINF 5510	3	Fall	
Clinical Informatics and Patient Safety HINF 5520	2	Spring	
Health Care Analytics and Data Science HINF 5531	2	Spring	
Interprofessional Health Informatics HINF 5540	2	Fall	
Health Informatics Teaching HINF 8525	2	Spring of alternate years	
Advanced Health Informatics Research Methods HINF 8535	3	Spring of alternate years	
Biostatistics I PUBH 6450	4	Fall Spring	Contact the School of Public Health for a permission number
Biostatistics II PUBH 6451	4	Spring	Contact the School of Public Health for a permission number

Transferred and Waived Courses

Students may transfer graduate-level credits from any regionally accredited university. All transfer credits must meet the program requirements and be approved by the advisor and the DGS. No more than 12 credits may be from non-degree status. Students must list transferred and double-counted courses on their Graduate Degree Plan (GDP) in order to get credit.

Students also have the option of waiving required courses if they have taken other courses that meet program requirements. The DGS must approve all waivers. Students who have courses waived will have to take an equal number of elective credits in order to earn a total of 70 credits in the program.

Forms

PhD students must complete five paper forms during the course of the program: the Graduate Degree Plan (GDP), the Preliminary Oral Report, the Reviewers' Report, the Graduate Application for Degree, and the Final Report. Other forms may be necessary to ask for exceptions to general graduate program rules and to request a leave of absence. Links to the GDP and forms for special circumstances are on the Graduate School website at www.grad.umn.edu/students/forms/doctoral.

Graduate Degree Plan (GDP)

PhD students list the 46 credits they will use for their official degree on the Graduate Degree Plan (GDP). The advisor(s), DGS, minor DGS (if applicable), and College Coordinator (CC) must all sign the GDP before

the Graduate School processes it. Students are responsible for getting their advisors' and minor DGS' signature and then submitting the GDP to the Plan Level Coordinator (PLC). The PLC reviews GDPs for accuracy and completion of degree requirements and obtains the DGS' and CC's signatures. The CC sends the completed GDP to the Graduate School for processing.

The GDP is for the most part self-explanatory, but there are a few things to keep in mind.

1. You may not be able to save information typed into the fields on the GDP. Test this before you spend lots of time completing the form.
2. The name field must be identical to your official university listing.
3. HINF does not have a language requirement.
4. Do not forget to check PhD thesis credits.
5. HINF courses taken for non-degree credit count as "major" courses. All other transfer work is "other".
6. A maximum of one-third of the credits listed on the GDP may be S/N.
7. You must have a 3.0 cumulative GPA with no grades below a C- listed on the GDP.
8. You may list courses you plan to take on the GDP. If you need to change your GDP at a later date, you will need to submit a petition and possibly a new GDP.
9. HINF courses are "major" courses; all other courses are "other" courses regardless of requirements.
10. Do not include GRAD 999, HINF 8444 (FTE), or HINF 8888 (PhD thesis).

We will put a hold on the record of any students who have not submitted the GDP in the semester before they plan to take the PWE. This is because students cannot submit a POE committee until the Graduate School has processed their GDP. See [Appendix I](#) for recommended submission dates.

Preliminary Oral Report

See Preliminary Exam Process below for information.

Graduation Packet

The graduation packet contains forms that students need to complete their degrees and graduate. Students must request the graduation packet online at www.grad.umn.edu/students/doctoral. Forgetting about the graduation packet is the *most common mistake* students make. It can have a *profound impact* on when they are able to graduate. See [Appendix I](#) for recommended packet request dates, and keep the following in mind:

1. PhD students cannot request a grad packet until they have passed their prelims.
2. Only students who have requested the grad packet may participate in commencement.
3. The Graduate School mails packets directly to students' homes, which may take several weeks.
4. The first form in the GDP is due on the first day of the intended month of graduation.
5. Students will not be penalized for submitting their forms early. If circumstances change, and they are not able to graduate in the intended month, the Graduate School will just enter the new month for graduation. Students will not have to submit new forms.

PhD students' graduation packets contain:

1. Application for Degree
2. Reviewers' Report (exchange for the Final Examination Report)
3. Instructions for submitting the thesis

Students are responsible for signing and submitting the Application for Degree to OneStop Student Services by the first day of the month of graduation. They are also responsible for collecting committee members' signatures on the Reviewers' Report and submitting it to the Graduate School in exchange for the Final Exam Report and submitting the final exam report by the last day of the month of graduation.

Preliminary Exam Process

There are two preliminary examinations PhD students must take in order to become PhD candidates: the Preliminary Written Exam (PWE) and the Preliminary Oral Exam (POE). The preliminary examinations assess whether students have achieved the necessary level of knowledge and skills to complete an original research project in the field of health informatics. They are designed to evaluate what students have learned from the courses they have listed on their GPD and whether or not their proposed research meets the criteria for an original, high quality research project.

Preliminary Oral Exam (POE) Committee

Although the POE is the second step in the prelim process, students must have a POE committee approved by the Graduate School before they may start the PWE. The POE committee includes the advisor(s), one member who is external to the HINF graduate faculty, and at least two members who are internal to the HINF graduate faculty. The external member may be a member of the HINF graduate faculty as long as he or she also has an appointment in another graduate program and is serving as a representative from that program. Experts who do not have a graduate faculty appointment in the university may be able to serve as the external committee member, if there are no similar experts at the university. The program, department, and university all have to approve such appointments. Students interested in this, should discuss the situation with the DGS and email the PLC for more details. Students who have declared a minor must have at least one member who represents the minor field. Students must also designate a chair for the committee. The advisor may chair the POE committee.

Preliminary Written Exam (PWE)

In the Health Informatics PhD program, the PWE is a 30-page research proposal rather than a written test. The two internal POE committee members who are not the advisor plus an additional graduate faculty member, chosen by the DGS, evaluate the PWE. Students are responsible for choosing the PWE topic. The topic may be the intended thesis research, related to that research, or some unrelated topic. *The proposal must be of the student's own creation.* Students are encouraged to consult with their advisors and members of their examining committee in selecting a topic; however, the specifics of the PWE must be the student's own work. Students may not use any research grant application written by their advisor in preparing the proposal. Students must conform to the ethical guidelines promulgated in the Code of Conduct and may not consult with other students or others outside the University of Minnesota in preparing the PWE.

PWE Structure and Content

The PWE should include 1) a statement regarding the significance of the problem; 2) a critical review of relevant literature leading to the stated hypothesis; 3) an original hypothesis about a problem in the field of health informatics; 4) a process or procedures for data collection to test this hypothesis; and 5) a discussion of anticipated results and alternative possibilities. Students are encouraged to consider a wide range of techniques and methodologies to evaluate the validity of the hypothesis. The scope should represent a project that can be completed by an individual within a reasonable period of time. The total length of the proposal is limited to 30 pages of double-spaced, 12-point Times New Roman font with 1-inch margins (excluding references). The following format (approximate page count in parentheses) should be used:

- I. Background and Significance (10 pages)
- II. Specific Aims, including statement of hypothesis (2 pages)
- III. Experimental Design & Data Collection (14 pages)
- IV. Anticipated Results and Alternatives (2 pages)
- V. Summary and Future Directions (2 pages)
- VI. References

Students who are actively enrolled in the PhD program, are in good academic standing, and have an approved GDP and POE Committee on file with the Graduate School may start the PWE process by notifying the DGS of their intent to take the PWE 30 days before they submit the PWE to the DGS. Although students are eligible to take the PWE at any time within the first four years of the program, we strongly recommend that they wait until they finish all or almost all of the coursework on the GDP in order to ensure the best chance of passing the examination. Students who do not complete the PWE within the first four years are subject to dismissal from the program. The intent must include the student's name, the title of the intended PWE, a brief abstract of the intended PWE, and at least one suggestion for a third PWE reviewer from the HINF graduate faculty.

Students must submit the completed PWE to the DGS 30 days after the submission date of the "Intent to take the PWE" letter. The PWE reviewers will grade the examination and report back within 30 days of the PWE submission date. Students have three opportunities to pass the PWE without reservations. In the first and second rounds, students may receive one of three outcomes: pass, pass with reservations, or fail.

In the event of a pass with reservations, the committee chair must inform the student and the immediately. The chair has up to 10 days to convey the reservations and a timeline for completion to the student in a letter. When the student has satisfied the committee's reservations, the chair must notify the student, the DGS, and the PLC.

Students who receive a fail in the first or second round may either revise the PWE or start over from scratch, based on the committee's recommendations. In the third round, students will either pass or fail. Students who fail in the third round are subject to dismissal from the program. Once a student passes,

either with or without reservations, or fails a third time, the PLC will document the outcome in the university's workflow system. The PLC will make a second entry to remove the reservations, if applicable, when a student has made the appropriate changes.

Preliminary Oral Exam (POE)

Students must take the Preliminary Oral Exam (POE) within one year of passing the PWE, or must request an extension from the DGS. Students who do not take the POE or request an extension within the year are subject to GEC review and possible academic probation. Students are responsible for working with their committee members and the IHI staff to schedule the POE. The exam usually takes two hours, but the committee is neither obligated to use all of that time nor to stop at the end of it. All members of the committee must be present for the defense in some form: face-to-face, videoconference or teleconference are all acceptable. Please note the Graduate School only accepts one faxed or scanned signature on the POE form. For more Graduate School requirements and recommendations related to remote committee members, see the appendix to the related policy: www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html.

Students also need to schedule the POE with the Graduate School *at least* one week before the exam online at www.grad.umn.edu/students/prelimschedule/index.html. This will prompt the Graduate School to create the Preliminary Oral Examination Report, which they will mail to the committee chair for the day of the exam.

The POE is a private oral presentation, during which students present their thesis proposal to their POE committee. In addition, they are responsible for the material covered in any of the courses on the GDP, including the courses in the minor or related field section of the program. The examination commences with a defense of the PWE proposal. This is followed by a defense of the thesis proposal, if different from the PWE proposal. Finally, committee members may ask questions which delve into other areas from other courses on the GDP. In particular, members of the examining committee representing the minor or other supporting program are encouraged to evaluate students for their breadth of knowledge.

Students have up to two opportunities to pass the POE without reservations. They may receive one of three outcomes: pass, pass with reservations, or fail. In the event of a pass with reservations, the committee chair must inform the student immediately. The chair has up to a week to convey the reservations to the student in a letter, which must also include the steps the student needs to take to remove them. A copy of the letter must be submitted to Graduate Student Services and Progress (GSSP) with the signed Oral Examination Report Form. Students have a maximum of four months to clear the reservations. When the student has satisfied the committee's reservations, the chair must write a second letter informing the student and the Graduate School that the reservations have been removed. The student may then proceed toward the degree.

If a student fails, the committee members must decide if they will grant the student a second opportunity to pass the exam. If the committee does not give the student a second chance or the student fails the second chance, the student will be dismissed from the program. For more information

about the POE grading, see the appendix to the related policy:

www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPE.html.

Regardless of the result of the POE, the PLC will email a copy of the signed form to the student. The student is responsible for submitting the original to the Graduate School.

Research and Dissertation

The PhD is an individual student's substantial addition to the body of scientific knowledge, and therefore should be on par with the quality of work expected of a research scientist. In turn, the preliminary and final exams are tests of the student's ability to form and frame a research question and research hypothesis (or hypotheses), as well as carry out the research and describe the results, and effectively communicate these to peers in written and oral form.

The culminating step is the presentation and successful defense of the dissertation. Candidates must submit a dissertation in one of the forms listed below that reports on an original research project conducted under the supervision of their advisor(s). The project should be based on the dissertation proposal presented during the POE and approved by the examination committee. Advisor(s) and the Final Oral Examination committee members will act as the advisory body, that guides students in their work.

While the dissertation proposal presented during the POE is the guiding document for the doctoral research project, candidates will make modifications as they proceed with the work due to scientific or practical reasons. Minor modifications (such as a change in the number of subjects, substituting a different statistical analysis technique, etc.) need the approval of the advisor(s). Major modifications to the project (such as switching to a different study population, substituting a new study design, etc.) require approval of the entire committee. In the rare event a candidate chooses to undertake the investigation of an entirely new research question, the committee may, required the candidate to prepare a new project proposal for committee approval.

Requirements for the doctoral research project

1. The project must be an investigation in an area that includes but is not limited to an area of health informatics.
2. The project must be original in nature in that it is not an exact duplicate of other published work nor a simple replication of an existing research study in a different setting.
3. The project must be original in that it is based on at least one research question that is not definitively answered in the published literature.
4. The project must hold the promise of contributing to the field of biomedical and health informatics by increasing the knowledge and understanding in a particular area of the field.
5. While software design and development are acceptable project components, they are not by themselves sufficient to constitute a project. If software development is part of the doctoral work, evidence must be presented that it meets the design specifications and functions. The dissertation must also include some form of scientifically defensible investigation of the value or impact of such software.

6. Investigations may be qualitative or quantitative in nature but must conform, in either case, to a scientifically rigorous methodology.
7. The project will consist of a defensible research question, one or more testable hypotheses derived from that research question and a set of one or more methodologies for attempting to generate answers to that research question.
8. It must include a reasonably thorough review of the related literature both with respect to the research question and the methodologies employed.
9. In the case where more than one methodology is possible, it must address the relevant merits of applicable methodological approaches and explain why the particular approach was chosen.

With DGS permission, any PhD students who have finished the majority of their coursework may register for thesis credits (HINF 8888), regardless of candidate status. However, most students wait until they pass their preliminary exams and become PhD candidates before they register. Candidates will need to register for 24 thesis credits total, which they may split over multiple semesters. Students who are receiving support and a tuition benefit from the IHI must take 12 credits per semester until they have completed all 24 thesis credits. Students supported by research assistantships (RA) from individual faculty members may negotiate the number of credits taken in a given semester with the PI of the project. Candidates who are not ready to defend after finishing their thesis credits may register for placeholder credits such as GRAD 999 or FTE credits. As with any other degree, candidates will need to maintain active status in the program in order to be eligible to graduate. Please see the handbook section about [maintaining active status](#) beginning on page 8 for more information.

Students may choose one of two options for their PhD thesis: a book-style extended manuscript and an article-style manuscript.

Book-Style Extended Manuscript

The book-style extended manuscript is a “traditional” thesis. It includes several chapters related to a single research question and study. The dissertation should include, but is not limited to, the following chapters: introduction, literature review, methods, results, discussion and conclusions, references, and appendices. Candidates must be the sole author of their dissertation document.

Article-Style Manuscript

The article-style manuscript is a single cohesive document that includes several (usually three) articles related to a single research question.

1. Typically, three articles are required, but this number is a guideline and may be modified upon approval of the entire committee and the DGS.
2. Each article must:
 - a. Have a target journal or be a peer-reviewed conference paper.
 - i. At least one of the targeted journals must be recognized as an “informatics” journal by the committee and the DGS.
 - ii. Journal articles must be formatted as required for the particular journal.

- iii. For conference papers, conference proceedings must be indexed in PubMed, or equivalent.
 - b. Have the student as first author unless another order is approved by the student, the student's full committee, and the DGS.
 - c. Be reviewed and approved by the student's dissertation committee.
 - i. WARNING: The Final Oral Examination committee is *not* obligated to approve any included manuscript for the sole reason that it has already been accepted for publication or has already been published.
 - ii. Prior to submission for publication, it is strongly recommended that students submit manuscripts to their committee members and obtain their approval to submit for publication.
 - d. Be prepared after the completion of the Preliminary Oral Exam.
 - It is permissible to use and cite work by the student completed, submitted, or accepted for publication prior to the Preliminary Oral Examination as background for the work reported in the Dissertation.
3. The submitted document containing the articles must be structured as follows:
- a. Introduction- Overall Introduction to the problem and the research question. The introduction must include a unified review of the literature related to the problem.
 - b. Articles as Chapters
 - c. Discussion and Conclusions- An overall discussion and conclusions relating the articles to each other and the research question.
 - d. Appendices- See copyright section (4.a.ii.).
4. Copyright
- a. Each of the articles must be in the form of a draft whose copyright does not pass to the publisher upon acceptance for publication.
 - i. This means that you may not use the published and copyrighted version of a manuscript as an Article Chapter unless the publisher/owner of the copyright gives to explicit permission to do so.
 - ii. You must submit documentation of any such approval as an appendix for your dissertation.
 - b. The candidate is considered to be the sole author of the dissertation document submitted to the University of Minnesota Graduate School and owns the copyright to the document submitted to the graduate school.

Final Exam Process

Final Oral Committee

The final oral committee assesses the student's defense of his or her thesis. Students may keep the committee members from their preliminary exam, but are not required to do so. Either way, students must submit a final committee with the Graduate School at <http://www.grad.umn.edu/students/assigndocfinalcommittee/index.html>. Unlike on the preliminary committee, the chair of the final committee must not be the advisor or co-advisor.

At the same time, candidates will delegate three members of the final committee to review the written thesis. These faculty members will sign the Reviewers' Report form. The reviewers must include a minimum of two major field faculty members and one minor or outside faculty member. In addition, advisor(s) must serve as reviewers. Students must provide reviewers with a copy of the dissertation at least 14 days before the scheduled date of the doctoral final oral examination.

Reviewers' Report

After they have read the dissertation, all designated reviewers must certify that the dissertation is ready for defense before by signing the Reviewers' Report, part of the Graduation Packet. Students are responsible for collecting the reviewers' signatures and for submitting it to the Graduate School in exchange for the Final Exam Report, the form committee members will sign at the end of the defense. Candidates should give the Final Exam Report to their chair before the beginning of the exam.

Defense

Students are responsible for working with their committee members and the IHI staff to schedule the thesis defense. PhD defenses takes between two and three hours. All members of the committee must be present for the defense in some form: face-to-face, videoconference or teleconference are all acceptable. Please note the Graduate School only accepts one faxed or scanned signature on the final exam form. For more Graduate School requirements and recommendations related to remote committee members, see the appendix to the related policy:

www.policy.umn.edu/Policies/Education/Education/DOCTORALPERFORMANCE_APPA.html.

The first portion of the exam is a public seminar during which candidates present their research. At least one week before the exam, candidates, must submit a title and a paragraph-length abstract to the PLC to distribute to the IHI listervs. After the public defense is the closed examination, during which the committee members ask questions related to the dissertation and relevant areas. At the end of the closed examination, the candidate leaves the room. The committee members take a secret ballot, discuss the candidate's defense, and then take a final vote. They will then sign the final exam form and let the candidate know the result. After the defense, the PLC will scan and copy the signed exam report and email it to the candidate. Candidates are responsible for submitting the original to the Graduate School by the last day of the intended month of graduation.

Submitting the thesis


Candidates have until the last day of the intended month of graduation to revise their thesis based on the reviewers' recommendations and to format it based on the Graduate School's requirements. Students will find very specific formatting guidelines and submission instructions in the graduation packet. Candidates must include a cover page signed by the advisor that states that the candidate has made the edits recommended by the final committee. Again, these instructions are in the Graduation Packet. Candidates will do well to remember that their thesis will be archived online in the University of Minnesota Conservancy, which means it will be accessible to anyone who is interested in reading it for many years to come.

Appendices

Appendix A: Data/File Server Access Request

AHC-IS WEB FORMS




Return to: [Academic Health Center](#) : [myU](#) : [U of M Home](#)

 **UNIVERSITY OF MINNESOTA**
Driven to DiscoverSM

[MyU](#) | [One Stop](#) | [Directories](#) | [Search U of M](#)


Academic Health Center

[forms.ahc.umn.edu](#) >> **DATA/FILE SERVER ACCESS REQUEST FORM**

I Would Like To: ☒ Add Access For This User  ☐ Modify This User's Access  ☐ Delete This User's Access 

USER INFORMATION

Employer:

X.500:  *

Employee ID: *

First Name: *

Last Name: *

Email: *

Phone: *

Building: *

Room: *

Department: *

Approver: Jessica Whitcomb-Trance

Phone: 612/626-6079

Email: jwhitcom@umn.edu

REQUESTER INFORMATION ☒ Same as User Information

X.500: [Click here to lookup](#)

First Name: *

Last Name: *

Email: *

Phone: *

USER'S SUPERVISOR INFORMATION ☐ Same as Requester Information

X.500: [Click here to lookup](#)


First Name: *


Last Name: *

Email: *

Phone: *

DEVICE

Does this user need a computer added to AHC-IS support? ☐ Yes ☒ No 

AHC-IS Device #: * [Click here after entering the device number](#) 

COMMENTS AND/OR SPECIAL INSTRUCTIONS

- Please make note of any server folders this user needs access to.
- If you would like this user to have the same access policy as another user in your department, please enter their name below.
- Please list all folders and/or servers you would like to delete access to for this user.

Please create an ID account, but please do not give access to the IHI shared-drive.

* = Required Field

Appendix B: Code of Conduct for Graduate Students in Health Informatics

All students are required by the University of Minnesota Board of Regents to comply with the University's Student Conduct Code, which can be found at www1.umn.edu/regents/policies/academic/Student_Conduct_Code.pdf. In addition, Health informatics professionals and professionals-in-training frequently deal with highly confidential information that must be handled in accordance with the very highest ethical standards. **Students who violate the University's Student Conduct Code or the following requirements of the Health Informatics Graduate Program are subject to sanctions up to and including academic dismissal.**

Academic Honesty

The Health Informatics Graduate Program insists on a strict policy of academic honesty for all students. Students who are suspected of academic dishonesty may be reported to the Office of Student Conduct and Academic Integrity and subject to the processes and sanctions related to academic misconduct as outlined in the Student Handbook.

Examples of Academic Misconduct include the following:

Cheating: Receiving or providing unpermitted help on an exam, copying or sharing test answers, engaging in unauthorized communication about or during an exam, giving test questions to one who hasn't taken the exam, using unauthorized material during an exam, submitting an altered exam for re-grading, taking a test for another, continuing to work on an exam when time is up, stealing others' work.

Fabrication: Fabricating or falsifying data, results, or references, e.g., in reports or papers submitted for class or in a thesis or dissertation.

Providing False Information: Giving forged excuses to postpone or avoid assignments or to add or drop classes, signing another's name or having another sign into a class, submitting recommendations for admission that were not written by the person whose name appears as the recommender.

Unauthorized Collaboration: Working with others on graded work without the instructor's permission (e.g., on in-class or take-home tests, papers, labs, or assignments).

Re-Using Work without Permission: Submitting the same work in more than one course or re-using work submitted in another course or for a different purpose, without the current instructor's permission.

Plagiarism: Using others' work (e.g., words, ideas, pictures, or data) from any source without giving proper credit. Others' words must be put in quotation marks and cited, and others' ideas must be cited even if paraphrased in the student's own words.

In addition, the student may be subject to appropriate sanctions as determined by the program and the University if he or she engages in the following:

Violating Security Rules: Allowing someone else to use your username and password, loaning any security authentication mechanism assigned to you (e.g. your UCard, building key, IHI entry code, etc.) to others, giving or presenting information that may identify an individual patient or human research subject to others who are not authorized to have or do not need this information.

Violating Confidentiality: In situations where the student has access to individually identifiable data that is subject to Federal and state privacy rules (e.g. HIPAA, ARRA, FERPA), accessing the data of a person without legitimate reason as defined by their job responsibilities; disseminating such data to others without permission of the person to whom the data belongs or adding to, deleting or altering that data without proper authorization from the owner of that data.

Violating Institutional Review Board (IRB) guidelines for the conduct of research: Revealing confidential patient data to those not authorized to view it, changing the experimental procedures without approval of the IRB, conducting research of any type (including Plan B projects) that involve human subjects without the review and approval of the IRB.

If you do not understand all of the above items or have questions, please discuss these with your advisor or the Director of Graduate Studies for Health Informatics. When all of your questions have been answered, sign one copy and return it to the Director of Graduate Studies.

I understand the expectations of me as a graduate student that is described in the above Code of Conduct including the references to other resources. I agree that as a graduate student in Health Informatics I will abide by the rules and regulations of the program and of the University of Minnesota.

Name (printed)

Signature

Date

Appendix C: HINF Courses

Course	Credits	Semesters offered	Type
HINF 5430 Health Informatics I	3	Fall	Required for all degrees
HINF 5431 Health Informatics II	3	Spring	Required for all degrees
HINF 5436 Seminar	1	Fall, Spring	Required twice for all degrees
HINF 5494 Topics in Health Informatics	1-6	Fall, Spring, Summer	Elective
HINF 5496 Internship	1-6	Fall, Spring, Summer	Independent Study
HINF 5499 Capstone Project	3	Fall, Spring, Summer	Required for MHI
HINF 5501 US Health Care System: Information Challenges in Clinical Care	1	Fall, Spring	Prerequisite
HINF 5502 Python Programming for the Health Sciences	2	Fall, Spring	Prerequisite
HINF 5510 Applied Health Care Databases: Database Principles and Data Evaluation	3	Fall	Required for all degrees
HINF 5520 Clinical Informatics and Patient Safety	2	Spring	Required for all degrees
HINF 5531 Health Care Analytics and Data Science	2	Fall, Spring (beginning Spring 2014)	Required for all degrees
HINF 5540 Interprofessional Health Informatics	2	Fall	Required for all degrees
HINF 8333 FTE: Master's	1	Fall, Spring, Summer	Placeholder
HINF 8405 Advanced Topics I	1-6	Fall	Elective
HINF 8406 Advanced Topics II	1-6	Spring	Elective
HINF 8444 FTE: Doctoral	1	Fall, Spring, Summer	Placeholder
HINF 8492 Advanced Readings	1-6	Fall, Spring, Summer	Independent Study
HINF 8494 Research	1-6	Fall, Spring, Summer	Independent Study
HINF 8525 Teaching	2	Spring of alternate years	Required for PhD
HINF 8535 Advanced Research Methods	3	Spring of alternate years	Required for PhD
HINF 8666 Doctoral Pre-Thesis Credits	1-6	Fall, Spring, Summer	Placeholder
HINF 8770 Plan B Project	4	Fall, Spring, Summer	Required for MS Plan B
HINF 8777 Thesis Credits:	1-18	Fall, Spring,	Required for MS Plan A

Master's		Summer	
HINF 8888 Thesis Credit: Doctoral	1-24	Fall, Spring, Summer	Required for PhD

Appendix D: Electives

This is not meant to be an exhaustive or exclusive list. Students interested in courses not appearing on this list should ask the DGS for guidance.

Biochemistry

BIOC 5361 Microbial Genomics and
Bioinformatics

Bioethics

BTHX 5610-Research and Publication Seminar

Biology

BIOL 5485-Bioinformatics: Experimental Design
and Computational Analysis in Systems
Biology

Biophysics

BPHY 8148-Advanced Digital Imaging Science

Cognitive Science

CGSC 8410-Perspectives in Learning,
Perception, and Cognition

Computer Science

CSCI 5106-Programming Languages
CSCI 5107-Computer Graphics I
CSCI 5109-Visualization
CSCI 5115-User Interface Design,
Implementation, and
Evaluation
CSCI 5271-Introduction to Computer Security
CSCI 5461-Functional Genomics, Systems
Biology, and
Bioinformatics
CSCI 5481-Computational Techniques for
Genomics
CSCI 5511-Artificial Intelligence I
CSCI 5521-Introduction to Machine Learning
CSCI 5525-Machine Learning
CSCI 5707-Principles of Database Systems
CSCI 5708- Architecture and Implementation of
Database Management Systems
CSCI 5801-Software Engineering I
CSCI 8725-Databases for Bioinformatics

Design

DES 5185 Human Factors in Design

Educational Psychology

EPSY 5244-Survey Design, Sampling, and
Implementation

Educational Psychology cont.

EPSY 8261-Statistical Methods I: Probability and
Inference
EPSY 8262-Statistical Methods II: Regression
and the General Linear Model

Genetics, Cell Biology & Development

GCD 8103-Human Histology

Industrial Engineering

IE 8541-Decision Support Systems

Information and Decision Sciences

IDSC 6040-Information Technology
Management
IDSC 6050-Information Technologies and
Solutions
IDSC 6471-Knowledge Management
IDSC 8711-Cognitive Science
IDSC 8721-Behavioral Decision Theory

Kinesiology

KIN 5001-Foundations of Human
Factors/Ergonomics

Linguistics

LING 5001-Introduction to Linguistics
LING 5205-Semantics
LING 5801-Introduction to Computational
Linguistics

Master of Business Administration

MBA 6240-Information Technology
Management

Medical Industry Leadership Institute

MILI 6552-Information Technology in Health
Care

MILI 6992 Healthcare Delivery Innovations:
Optimizing Cost and Quality

MILI 6995-Medical Industry Valuation
Laboratory

Nursing

NURS 5115-Interprofessional Healthcare
Informatics

NURS 5116-Consumer Health Informatics

NURS 5117-Consumer Health Informatics
Practicum

NURS 5241-NursingLeadershipEffective
Practicum

NURS 6105-System Analysis Design

NURS 7106-Knowledge Representation and
Interoperability Practicum

NURS 7108-Population Health Informatics

NURS 7109-Population Health Informatics
Practicum

NURS 7113-Clinical Decision Support: Theory

NURS 7114-Clinical Decision Support Practicum

NURS 7118 Human Factors and Human-
Computer Interaction in Health Informatics

NURS 7610-Health Innovations and Leadership

NURS 8115- Integrated Seminar in Nursing
Informatics

NURS 8116-Clinical Decision Support: Theory
and Application

Pharmacy

PHAR 5201-Applied Health Sciences
Terminology

PHAR 6257-Leadership Best Sellers for
Pharmacists

Public Health

PUBH 6020-Fundamentals of Social and
Behavioral Science

PUBH 6025-e-Public Health: Design,
development and testing of effective online
Public Health interventions

PUBH 6102-Issues in Environmental and
Occupational Health

PUBH 6131-Working in Global Health

PUBH 6320-Fundamentals of Epidemiology

Public Health cont.

PUBH 6325-Data Processing with PC-SAS

PUBH 6341-Epidemiologic Methods I

PUBH 6386-PubH Aspects of CV Disease

PUBH 6420-Intro to SAS Programming

PUBH 6470-SAS Procedures & Data Analysis

PUBH 6541-Statistics for Health Management
Decision Making

PUBH 6547-Health Care Human Resources
Management

PUBH 6555-Topics in Health Economics

PUBH 6556-Health and Health Systems

PUBH 6557-Health Finance I

PUBH 6558-Health Finance II

PUBH 6560-Operations Research and Quality in
Health Care

PUBH 6562-Information Technology in Health
Care

PUBH 6563-Integrated Delivery Systems

PUBH 6564-Private Purchasers of Health Care:
Roles of Employers and Health Plans in U.S.
Health Care System

PUBH 6565-Innovation of Healthcare Services

PUBH 6589- Medical Technology Evaluation and
Market Research

PUBH 6617-Practical Methods for Secondary
Data Analysis

PUBH 6717-Decision Analysis for Health Care

PUBH 6724-Health System and Public Health

PUBH 6742 Ethics in Public Health: Research
and Policy

PUBH 6751-Principles of Management in Health
Services Organizations

PUBH 6765-Continuous Quality Improvement:
Methods and Techniques

PUBH 6780-Topics in Public Health
Administration and Policy

PUBH 6800-Topics in Health Services Research
and Policy

PUBH 6802-Managing Electronic Health
Information

Public Health cont.

PUBH 6803-Conducting a Systematic Literature Review

PUBH 6832-Economics of the Health Care System

PUBH 6862-Cost-Effectiveness Analysis in Health Care

PUBH 6863-Understanding Health Care Quality

PUBH 7400-Topics: Biostatistics

PUBH 7405-Biostatistics: Regression

PUBH 7407-Analysis of Categorical Data

PUBH 7415-Introduction to Clinical Trials

PUBH 7430-Statistical Methods for Correlated Data

PUBH 7435 Latent Variable Measurement Models and Path Analysis

Public Health cont.

PUBH 7440-Introduction to Bayesian Analysis

PUBH 7460-Advanced Statistical Computing

PUBH 7475-Statistical Learning and Data Mining

PUBH 7588 Information Uses in Long-Term Care

PUBH 8801-Health Services Policy Analysis: Theory

PUBH 8810-Research Studies in Healthcare

Scientific Computation

SCIC 8011-Scientific Visualization

Statistics

STAT 5101-Theory of Statistics I

STAT 5302-Applied Regression Analysis

STAT 5303-Designing Experiments

Appendix E: MHI Degree Completion Steps and Sample Plans of Study



DEGREE COMPLETION STEPS

Master's Plan B

Master's Plan C

In order to receive your degree, the following procedures must be completed. You must maintain active student status by registering every fall and spring semester until your degree is awarded. All forms must be submitted to the Graduate Student Services and Progress (GSSP) office unless otherwise noted. Contact your graduate program office for program-specific requirements, deadlines, and to determine if your program requires a committee.

1 Complete Graduate Degree Plan

Submit at least one semester prior to anticipated graduation

2 Assign members to master's final exam committee

If applicable, complete at least one month prior to exam via www.grad.umn.edu/students/forms/masters/index.html

3 Request Graduation Packet

The packet will include the Graduate Application for Degree form and the Final Examination Report/Final Report form. You can request it in person or online up to one semester before your master's final exam.

4 Submit Graduate Application for Degree

Submit to One Stop by the first business day of anticipated month of graduation

5 Submit Final Examination Report/Final Report

Submit by the last business day of anticipated month of graduation

Questions?

Contact the Graduate Student Services and Progress office (160 Williamson Hall).

<http://www.grad.umn.edu/students/masters/index.html>

Amber Cellotti

Degree Progress & Completion

gssp@umn.edu

612-625-4019

One Year: September-August

Fall		Spring	
Classes	Credits	Classes	Credits
HINF 5430	3	HINF 5431	3
HINF 5436	1	HINF 5436	1
HINF 5510	3	HINF 5520	2
HINF 5540	2	HINF 5531	2
PUBH 6414	3	Electives	5
Electives	2		
Total	14	Total	13
Forms	Due	Forms	Due
Submit GDP	Dec. 31	Request Grad Packet	April 30
Summer			
Classes	Credits	Forms	Due
HINF 5499	3	Application for Degree	Aug. 1
Total	3	Final Exam Report	Aug. 31
Program Total	30		

Two Years: September-May

Fall Year 1		Spring Year 1	
Classes	Credits	Classes	Credits
HINF 5430	3	HINF 5431	3
HINF 5436	1	HINF 5520	2
HINF 5510	3	PUBH 6414	3
Total	7	Total	8
Fall Year 2		Spring Year 2	
Classes	Credits	Classes	Credits
HINF 5436	1	HINF 5499	3
HINF 5540	2	HINF 5531	2
Electives	4	Electives	3
Total	7	Total	8
Forms	Due	Forms	Due
Submit GDP	Aug. 31	Application for Degree	May 1
Request Grad Packet	Dec. 31	Final Exam Report	May 31

Two Years: January-December

Spring Year 1		Fall Year 1	
Classes	Credits	Classes	Credits
HINF 5431	3	HINF 5430	3
HINF 5436	1	HINF 5436	1
PUBH 6414	3	HINF 5510	3
Total	7	Total	7
Spring Year 2		Fall Year 2	
Classes	Credits	Classes	Credits
HINF 5520	2	HINF 5499	3
HINF 5531	2	HINF 5520	2
Electives	4	Electives	3
Total	8	Total	8
Forms	Due	Forms	Due
Submit GDP	June 30	Application for Degree	Dec. 1
Request Grad Packet	Aug. 31	Final Exam Report	Dec. 31

Three Years: September-May

Fall Year 1		Spring Year 1	
Classes	Credits	Classes	Credits
HINF 5430	3	HINF 5431	3
PUBH 6414	3	HINF 5520	2
Total	6	Total	5
Fall Year 2		Spring Year 2	
Classes	Credits	Classes	Credits
HINF 5436	1	HINF 5436	1
HINF 5510	3	HINF 5531	2
Electives	2	Electives	2
Total	6	Total	5
Forms	Due		
Submit GDP	Aug. 31		
Fall Year 3		Spring Year 3	
Classes	Credits	Classes	Credits
HINF 5540	2	HINF 5499	3
Electives	3		
Total	5	Total	3
Forms	Due	Forms	Due
Request Grad Packet	Dec. 31	Application for Degree	May 1
		Final Exam Report	May 31

Three Years: January-December

Spring Year 1		Fall Year 1	
Classes	Credits	Classes	Credits
HINF 5431	3	HINF 5430	3
HINF 5520	2	PUBH 6414	3
Total	5	Total	6
Spring Year 2		Fall Year 2	
Classes	Credits	Classes	Credits
HINF 5436	1	HINF 5436	1
HINF 5531	2	HINF 5510	3
Electives	2	HINF 5540	2
Total	5	Total	6
Forms	Due	Forms	Due
Submit GDP	May 31	Application for Degree	
Spring Year 3		Fall Year 3	
Classes	Credits	Classes	Credits
HINF 5499	3	Electives	3
Electives	2		
Total	5	Total	3
Forms	Due	Forms	Due
Request Grad Packet	Aug. 31	Application for Degree	Dec. 1
		Final Exam Report	Dec. 31

Appendix F: Capstone Cover Page

{Title}

Capstone Report
in partial fulfillment of the requirements
for the Master in Health Informatics (MHI)
in the Health Informatics Graduate Program (HINF)

by
{Name}

Capstone Coordinator
{Name}

Signature

Date

Project Coordinator
{Name}

Signature

Date

Appendix G: MS Plan A Degree Completion Steps and Sample Plans of Study



DEGREE COMPLETION STEPS

Master's Plan A

In order to receive your degree, the following procedures must be completed. You must maintain active student status by registering every fall and spring semester until your degree is awarded. All forms must be submitted to the Graduate Student Services and Progress (GSSP) office unless otherwise noted. Contact your graduate program office for program-specific requirements and deadlines.

1 Complete Graduate Degree Plan

Submit at least one semester prior to anticipated graduation

2 Assign members to master's final exam committee

Complete at least one month prior to exam via www.grad.umn.edu/students/forms/masters/index.html

3 Request Graduation Packet

The packet will include the Graduate Application for Degree form and Reviewers' Report form. You can request it in person or online up to one semester before your master's final exam.

4 Submit Graduate Application for Degree

Submit to One Stop by the first business day of anticipated month of graduation

5 Submit Reviewers' Report

Submit prior to master's final exam to obtain the Final Examination Report form.

6 Submit Final Examination Report

Must be submitted no later than the last business day of anticipated month of graduation.

7 Submit Thesis

Submit by the last business day of anticipated month of graduation. Consult your Graduation Packet for formatting guidelines.

Questions?

Contact the Graduate Student Services and Progress office (160 Williamson Hall).

www.grad.umn.edu/students/masters/index.html

Amber Cellotti

Degree Progress & Completion

gssp@umn.edu

612-625-4019

OTR201

3/13

Plan A Two Years: September-May

Fall Year 1		Spring Year 1	
Classes	Credits	Classes	Credits
HINF 5430	3	HINF 5431	3
HINF 5436	1	HINF 5520	2
PUBH 6450	4	HINF 5531	2
		PUBH 6451	4
Total	8	Total	11
Fall Year 2		Spring Year 2	
Classes	Credits	Classes	Credits
HINF 5436	1	HINF 8777	10
HINF 5510	3		
HINF 5540	2		
Elective	1		
Total	7	Total	10
Forms	Due	Forms	Due
Submit GDP	Aug. 31	Application for Degree	May 1
Request Grad Packet	Dec. 31	Final Exam Report	May 31

Plan A Two Years: January-December

Spring Year 1		Fall Year 1	
Classes	Credits	Classes	Credits
HINF 5431	3	HINF 5430	3
HINF 5436	1	PUBH 6450	4
HINF 5520	2	HINF 5510	3
HINF 5531	2	HINF 5540	2
Total	8	Total	12
Spring Year 2		Fall Year 2	
Classes	Credits	Classes	Credits
HINF 5436	1	HINF 8770	8
HINF 8770	2		
PUBH 6451	4		
Elective	1		
Total	8	Total	8
Forms	Due	Forms	Due
Submit GDP	June 30	Application for Degree	Dec. 1
Request Grad Packet	Aug. 31	Final Exam Report	Dec. 31

Appendix H: MS Plan B Degree Completion Steps and Sample Plans of Study



DEGREE COMPLETION STEPS

Master's Plan B

Master's Plan C

In order to receive your degree, the following procedures must be completed. You must maintain active student status by registering every fall and spring semester until your degree is awarded. All forms must be submitted to the Graduate Student Services and Progress (GSSP) office unless otherwise noted. Contact your graduate program office for program-specific requirements, deadlines, and to determine if your program requires a committee.

1 Complete Graduate Degree Plan

Submit at least one semester prior to anticipated graduation

2 Assign members to master's final exam committee

If applicable, complete at least one month prior to exam via www.grad.umn.edu/students/forms/masters/index.html

3 Request Graduation Packet

The packet will include the Graduate Application for Degree form and the Final Examination Report/Final Report form. You can request it in person or online up to one semester before your master's final exam.

4 Submit Graduate Application for Degree

Submit to One Stop by the first business day of anticipated month of graduation

5 Submit Final Examination Report/Final Report

Submit by the last business day of anticipated month of graduation

Questions?

Contact the Graduate Student Services and Progress office (160 Williamson Hall).

<http://www.grad.umn.edu/students/masters/index.html>

Amber Cellotti

Degree Progress & Completion

gssp@umn.edu

612-625-4019

Plan B Two Years: September-May

Fall Year 1		Spring Year 1	
Classes	Credits	Classes	Credits
HINF 5430	3	HINF 5431	3
HINF 5436	1	HINF 5520	2
PUBH 6450	4	HINF 5531	2
		PUBH 6451	4
Total	8	Total	11
Fall Year 2		Spring Year 2	
Classes	Credits	Classes	Credits
HINF 5436	1	HINF 8770	4
HINF 5510	3	Electives	4
HINF 5540	2		
Electives	3		
Total	9	Total	8
Forms	Due	Forms	Due
Submit GDP	Aug. 31	Application for Degree	May 1
Request Grad Packet	Dec. 31	Final Exam Report	May 31

Plan B Two Years: January-December

Spring Year 1		Fall Year 1	
Classes	Credits	Classes	Credits
HINF 5431	3	HINF 5430	3
HINF 5436	1	PUBH 6450	4
HINF 5520	2	HINF 5510	3
HINF 5531	2	HINF 5540	2
Total	8	Total	12
Spring Year 2		Fall Year 2	
Classes	Credits	Classes	Credits
HINF 5436	1	HINF 8770	4
PUBH 6451	4	Electives	4
Electives	3		
Total	8	Total	8
Forms	Due	Forms	Due
Submit GDP	June 30	Application for Degree	Dec. 1
Request Grad Packet	Aug. 31	Final Exam Report	Dec. 31

Appendix I: PhD Degree Completion Steps and Sample Plan of Study



UNIVERSITY OF MINNESOTA

In order to receive your degree, the following procedures must be completed. You must maintain active student status by registering every fall and spring semester until your degree is awarded. All forms must be submitted to the Graduate Student Services and Progress (GSSP) office unless otherwise noted. Contact your graduate program office for program-specific requirements and deadlines.

DEGREE COMPLETION STEPS

Doctor of Philosophy

Doctor of Education

1

Complete Graduate Degree Plan

Submit at least one semester prior to your preliminary oral exam

2

Assign members to preliminary oral exam committee

Complete at least one month prior to exam via www.grad.umn.edu/students/forms/doctoral/index.html

3

Complete Preliminary Written Exam

Program staff report results to GSSP. Must be on file with GSSP to be authorized to take preliminary oral exam

4

Schedule preliminary oral exam

Notify GSSP of scheduled exam at least one week in advance

5

Submit Preliminary Oral Report

Submit for your record to reflect doctoral candidacy

6

Assign members to doctoral final exam committee

Complete at least one month prior to exam via www.grad.umn.edu/students/forms/doctoral/index.html

7

Request Graduation Packet

Packet will include the Graduate Application for Degree form and Reviewers' Report form. You can request it in person or online up to one semester before your doctoral final exam.

8

Schedule doctoral final exam

Notify GSSP of scheduled exam at least one week in advance

9

Submit Graduate Application for Degree

Submit to One Stop by the first business day of anticipated month of graduation

10

Submit Reviewers' Report

Submit prior to your defense

11

Submit Doctoral Final Exam Report

Submit no later than the last business day of anticipated month of graduation

12

Submit dissertation/project

Submit by the last business day of anticipated month of graduation. Consult Graduation Packet for formatting guidelines.

Questions?

Contact the Graduate Student Services and Progress office
(160 Williamson Hall)
<http://www.grad.umn.edu/students/doctoral/index.html>

Stacia Madsen

Degree Progress & Final Exams

gssp@umn.edu

Prelim Exams

gssp@umn.edu

612-625-0168

OTR204
3/13

Coursework in Two Years

Fall Year 1		Spring Year 1	
Classes	Credits	Classes	Credits
HINF 5430	3	HINF 5431	3
HINF 5436	1	HINF 5436	1
HINF 5510	3	HINF 5520	2
PUBH 6450	4	HINF 5531	2
		PUBH 6451	4
Total	11	Total	12
Fall Year 2		Spring Year 2	
Classes	Credits	Classes	Credits
HINF 5540	2	HINF 8525	2
Electives	9	HINF 8535	3
		Electives	7
Total	11	Total	12