

**College of Information Studies**  
**Academic Program Self Study: Doctoral Program**  
*May 2017*

**Strategic overview of the program:**

**Mission:** The UMD iSchool doctoral program educates a diverse group of students to answer fundamental questions and solve information challenges to address society's problems and increase social good.

**Vision:** Today's hardest social and technical problems have information at their core. University of Maryland iSchool's PhD students conduct original research to answer hard questions about information problems. UMD iSchool faculty and PhD students work side-by-side to conduct collaborative, interdisciplinary, and innovative research. Our PhD program facilitates cutting-edge discoveries and trains new generations of information studies scholars to continue research worldwide.

**Strategic goals:** UMD doctoral students should be able to conduct collaborative, interdisciplinary, innovative, and rigorous research. This requires understanding existing research in information studies and interdisciplinary cognates; developing new research questions; performing rigorous data collection and analysis to answer those questions; and sharing findings with scholarly and public communities.

- Collaborative research requires enabling our students to work with peers by fostering excellent scholarly communication skills.
- Interdisciplinary research requires enabling our students to work across traditional academic boundaries by fostering knowledge of diverse epistemologies and methods.
- Innovative research requires enabling our students to discover new ideas by deepening their knowledge of existing research and helping them identify cutting-edge research areas.
- Rigorous research requires enabling our students to recognize methods for meaningful data collection, design, and discovery.

To meet the strategic goals of increasing collaborative and interdisciplinary research, the doctoral program will grow as the iSchool's faculty grows. New research-active faculty will increase the number of advisers with interdisciplinary expertise, and new opportunities to TA in our undergraduate program increase the ability to fund more students while enhancing students' flexibility in choosing an adviser and approach. To meet the strategic goals of increasing innovative and rigorous research, we also seek to increase our competitiveness in recruitment, retention, and student placement.

**Objectives:** The Ph.D. degree is an academic degree, providing a background in pedagogy, theory, and research to prepare graduates for careers in conducting

research and teaching in Information Studies. We offer an interdisciplinary approach to research and teaching that entwines social and technical innovation. Our program draws on core values of information studies, including justice, inclusion, and access, and use these principles to facilitate the discovery of new knowledge.

***Learning outcomes:*** To complete the program, students must demonstrate high attainment in scholarship and critical thinking, as well as the ability to carry out independent scholarly research. Upon successful completion of the doctoral program, graduates have:

- Knowledge of the foundations of the field of information studies.
- Mastery of research methods and design.
- Understanding of the research in a specialized content area.
- Proficiency in synthesizing and applying knowledge from a variety of areas.
- Expertise in conducting research and disseminating new knowledge.

### **Curriculum design, content, and integration:**

Students must complete a minimum of 27 graduate credit hours in three areas: Information Studies (6 credit hours); Research Methods and Design (12 credit hours) and specialized area(s) (9 credit hours). The required courses for doctoral students are currently:

- INST 800: The Engaged Intellectual: An Introduction to Research and Academic Work (3 credit hours towards Research Methods and Design requirement)

This course explores a series of issues that confront academics who work in research universities. The course is an “Introduction to Research,” but the process of research is more than a recipe of rote analytical procedures. The course examines academic life with a particular focus on what it means to undertake research, teaching, and service. By the conclusion of the course, students will have a better understanding of what tenure-track faculty do and how they work in academia and of how they intend to structure their own professional careers.

- INST 810: Individual Research Experience (3 credit hours towards Research Methods and Design requirement)

This is an independent study course in which a student develops and implements a research project with an iSchool faculty mentor. A student reports research results in a paper and an oral presentation at the end of the semester.

- INST 888: Doctoral Seminar (6 credit hours towards Information Studies requirement)

This course is offered in two semesters, covering the main areas of the Information Studies field: information, people, environments, and systems. These doctoral gateway seminars provide an integrative exploration of the field, emphasizing connections among ideas and research across elements of

the field. Specific topics and readings to be covered will be determined by individual instructors.

In addition, students must take at least two quantitative, qualitative, and/or mixed research method courses, beyond the basic statistics requirement. Typically, students take one quantitative methods course and one qualitative methods course, but students may also substitute a mixed-methods course for either or both of these requirements.

All students have a First Year Review at the close of their first full year in the program. Students prepare a portfolio that self-evaluates progress. The portfolio may include papers written for coursework or research, a presentation on a research topic, and/or reviews by previous course instructors. A committee comprised of at least three faculty members, a majority of whom must be members of the iSchool faculty, reviews the work and informs the student in writing of the results.

Students write an Integrative Paper that synthesizes and applies knowledge from broad areas of the information field.

The purpose of the dissertation is to demonstrate the ability to successfully conduct original and meaningful research that contributes to the scholarly discourse.

In addition, the college provides options for a Ph.D. student to attain teaching experience through teaching internships at the university in appropriate Information Studies venues or at other institutions. For instance, doctoral students may work with faculty members in the course "Individualized Teaching Experience" (INST 809) and teach a course in their areas of interests under faculty guidance.

Small classes and wide-ranging research projects enable students to work closely with faculty mentors to gain experience in identifying knowledge gaps, investigating both theoretical and practical solutions, evaluating results, and creating and disseminating new knowledge. A range of required research courses, two foundational doctoral seminars, and electives chosen by the students and their faculty mentors provide both the structure necessary for individuals to become successful researchers and the flexibility that allows them to pursue the research areas about which they are most passionate.

### ***Assessment activities:***

Integrative paper:

Students complete an integrative paper that demonstrates the ability to independently conduct and disseminate high quality research and scholarship. A committee comprised of the student's advisor and at least two other college faculty members review the integrative paper, write evaluations, and then meet to discuss the evaluations with the student. The advisor writes a report of the discussion and the recommendations made. Students are evaluated in several areas including:

- Identification of a research problem and including the student's motivations of undertaking the research
- Identification of key literature in three areas of the field of study, synthesizing the lenses information, people, systems, and environment as

they apply to a specific area of specialization, and utilization of appropriate research methods

- A clear and succinct statement of a research question
- Preparation of an integrative paper that makes an original contribution to the integration of selected areas
- Production of a paper that is suitable for publication

#### Dissertation Proposal:

Before beginning to collect data for their dissertation research, students prepare and present a proposal to their committee. The proposal must include a literature review, a research plan, a description of the proposed research methods, a description of the research goals and objectives, a proposed timeline, an outline of the potential limitations of the study, and any other elements deemed appropriate by their committee. Students' proposals are evaluated as to how well they meet each of the following requirements:

- Identification of a significant and original problem
- Creation of a theoretical framework based on relevant literature
- Inclusion of a clear, succinct statement of the research questions to be addressed
- Selection of methodology appropriate to the research questions
- Description of a clear plan for presenting data and findings
- Creation of a written product that is clear, well-organized, and grammatically correct
- Inclusion of a detailed, feasible timeline in which the work will be completed

#### Dissertation Defense:

Student dissertations are evaluated based on how well they meet each of the following requirements:

- Identification of a significant and original problem
- Creation of a theoretical framework based on relevant literature
- Clear and succinct statement of research question(s)
- Appropriate choice of methodology
- Clear and thorough presentation of data and discussion of findings
- Creation of a written product that is clear, well-organized, and grammatically correct
- Delivery of a clear, well-organized presentation of the study
- Production of material that is suitable for publication

### ***Program staffing and resources***

#### Staff:

The PhD program staff includes the following positions:

- **PhD Program Director.** Approximately 15% of an associate professor.
- **PhD Program Associate Director.** 20% of a 9.5-month lecturer.
- **PhD Program Graduate Assistant.** 50% (10 hours per week) of a 12-month

assistantship.

In addition to these dedicated positions, the PhD program receives support from Graduate Student Services, especially in the areas of admissions and student record keeping. The PhD program also receives support from the Director of Academic Programs and the iSchool Deans.

The current level of staffing is (just barely) sufficient to keep the program running at its current size and level of service. In order to make significant improvements to the experience of current PhD students (and thus to attract more competitive applicants), more time and resources could be dedicated to such efforts as curriculum revision, increasing amount and quality of extra-curricular programming and information resources for students, offering individual support to students having trouble making progress.

Facilities:

Because PhD students are encouraged to become fully-engaged members of the iSchool community -- especially those full-time students who work in the iSchool and do much of their academic work on campus -- PhD students occupy iSchool spaces and use community resources at a level similar to that of full-time employees.

Many PhD students have expressed a desire to feel a stronger sense of community within the program. We think that allocation of work space can foster community, and the current approach of assigning full-time students to workspaces with proximity to their advisors or labs is working well. However, we could improve by offering some kind of designated space for part-time or self-funded students, who are more likely to feel isolated from the student community and who could use access to a dedicated (yet shared) place to work among other PhD students, instead of in the lounge.

Some of the facilities needs that are particular to PhD students are:

- Offices, cubicles, and furniture for PhD students with college-funded or faculty-funded assistantships
  - According to a Fall 2016 survey, most PhD students (27/28 respondents) were relatively satisfied with their work space situation
  - Common facilities requests from PhD students include
    - Better chairs
    - Access to College printers (esp. for students who are not College or faculty-funded GAs)
    - Designated, shared work space for part-time or self-funded students
- Use of collaborative spaces for planned and spontaneous student meetings
- Use of conference rooms and seminar rooms for discussion groups, practice talks, defenses

Budget:

\$5000 in discretionary funds

\$8000 travel fund for students

**Program evaluation:**

Doctoral Graduate Outcomes Assessment (DGOA) forms are compiled for each assessment activity in the doctoral curriculum. These forms are filled out by faculty participating in student assessment, and compiled by the doctoral program coordinator.

The doctoral committee reviews the DGOA data on an annual basis to assess the program's success in fostering doctoral student progress through the learning objectives. The data generated by these assessment processes, particularly students' scores on specific rubric items, shed light on where students may be facing obstacles in their PhD degree progression.

This information has motivated continued discussion about these benchmarks and the measures and criteria used to assess student success on each of them. In tandem with a curriculum reform process, we will revise these forms with the goal of iteratively improving and evolving the PhD program to better meet the needs of the students, to optimize the quality of the education the students receive, and to ensure the program's ongoing success.

Other qualitative indicators used to evaluate the success of the program include a recent review of graduate placement, a survey of student feedback, and monthly review of students facing difficulties in the program.

**Program accomplishments and challenges:**

**Accomplishments:**

Most iSchool commencement ceremonies in recent years have included 2-4 PhD graduates. In Spring 2016, there was a significant spike in graduations, with 8 students receiving their doctorates. While we only have one student finishing in time for 2017 commencement, there are two more dissertation defenses scheduled for early summer. Also, another 7-8 students are well on track to successfully defend in the coming academic year, giving us strong potential for another PhD-rich commencement ceremony in Spring 2018.

Doctoral students have also been successful at publishing, and are regularly recognized with university and national awards. (Details can be found in the longitudinal data, below).

Our PhD students hold internships at and conduct research in government agencies, top technology and design firms, and the nonprofit sector; and graduate to jobs in academia, industry, and government. A recent overview of student placement data for the 30 students who have graduated since 2006 revealed that 19 are in academic research positions, 14 of which are tenure-track. Another 4 students

work in government, 5 in industry research positions, and 1 at a nonprofit think tank.

Recent program changes are also among our accomplishments. The last few years have seen the institution of closer student tracking to ensure timely completion of program milestones. Students are now consistently reviewed yearly, and we expect that the average time to graduation will decrease.

We have also laid the groundwork for our program to expand by changing the admissions model for doctoral students. Students are now admitted with a provisional adviser, but are encouraged to get to know multiple faculty to find their permanent adviser within a two-year timeframe. Students may work as TAs until they find a research project for which to work as a GA.

**Challenges:** The challenges of UMD's doctoral program are many. Some are challenges fundamental to doctoral education; other are unique to our institution.

With a multidisciplinary faculty studying such diverse topics as online communities, information systems, information policy, human-computer interaction, and digital cultural heritage, the iSchool cultivates doctoral students from a wide range of backgrounds. A particular challenge is providing courses tailored for students with diverse backgrounds and diverse work and research paths. To address this challenge, we have begun several curriculum revision efforts. This includes revising introductory courses to address gaps in theoretical and methodological knowledge. Director Shilton has worked with several PhD students to consult syllabi at peer institutions and is drafting a proposal for a new set of courses, a process to be continued in the next academic year.

We also seek to take advantage of the new availability of 1-credit courses in the iSchool. In the next year or two we will propose a series of 1-credit methods courses tightly focused on particular methods that could be taught by any interested faculty.

A long-term challenge is providing elective course content tailored to PhD students. As we add faculty to the program, we should consider providing elective seminars for doctoral students. The current model of asking doctoral students to take primarily masters-level courses is a challenge for our program.

Another challenge particular to our program is facilitating doctoral student community. Many students work full time; many students and faculty commute to campus great distances, and do not come in every day. The doctoral committee should consider issues such as creating social opportunities across cohorts, and better communicating the role (and possibilities enabled by) the iSchool's many centers and labs for community-building.

The UMD iSchool also faces challenges recruiting top doctoral students. Faculty's top choices are often lost to top-tier institutions with stronger reputations and stronger funding packages. The doctoral committee has proposed raising GA/TA funding to be competitive with computer science funding levels. If implemented, we believe this will help with recruitment.

Another challenge is that our PhD is not classified as a STEM program. This means that our students may not be eligible for some high-profile scholarships (e.g. the

NSF's graduate fellowship), and international graduates may not be eligible for post-graduate work extensions on their visas. The doctoral committee should investigate STEM classification.

We have recently improved our ability to offer teaching experiences to PhD students through expansion of our undergraduate program. However, there is currently little infrastructure in place to scaffold pedagogical training for PhD students. A current teaching apprenticeship model (through the 809 course number) is a start but student experiences vary widely depending on faculty involvement. Considering more formal training requirements for TAs at the iSchool or campus level is an ongoing issue for the doctoral committee.

Our program also faces challenges that many doctoral programs face. For example, there are tensions between unifying the program experience for students through stricter policies and standards, or letting advisers see to the needs of students more individually.

It is also unclear if we do enough to facilitate opportunities for students who wish for career paths outside of academia. Should the doctoral committee be more involved in developing internship opportunities for students in industry and government?

Similarly, we face challenges in supporting part-time students. Our program has welcomed PhD students who work full time and want to work part time on their doctorates. Often, students in this category are using the PhD to enhance or extend current careers (including policy, leadership, entrepreneurship, and government). Part-time students face particular challenges accessing student and campus communities, and more critically, managing the substantial workload of earning a PhD while maintaining full-time work. While our historical data on these cases is too spotty to provide precise counts, part-time students comprise the preponderance (almost the totality) of students who have been dismissed or have withdrawn (while not in good standing) from the program. Four of the five students currently under threat of dismissal due to lack of satisfactory progress work full time. Moving forward, we must collect (and maintain) data about students' academic status as full-time or part-time *and* their work status as full-time or part time. We also must keep more descriptive records about the reasons why students leave the program.

Most importantly, the PhD program should develop, identify, and implement resources and processes to help PhD students who struggle with degree progress for any reason. The PhD committee recently approved two-year time limits between candidacy and dissertation proposal, and between dissertation proposal and dissertation defense. Articulating these expectations in the Handbook and program culture will, hopefully, decrease the number of occurrences of "invisible dissertators" (those who drop out of contact with their advisors and committees once they advance to candidacy). This period of solitary and intensive work seems to be especially difficult for part-time students.

Finally, the doctoral program suffers from a bit of confusion about the amounts of financial resources available to students. Identifying and managing funds for student travel, student scholarship support, and support of student research is haphazard and needs to be systematized. The doctoral coordinators are



working with the Director of Academic Programs to improve this issue.

### Longitudinal Data

Relevant to program effectiveness showing cumulative trends

a) Recruitment effectiveness over time

	Applied	Rejected	Accepted	Matriculated	Yield
<b>2017-2018</b>	85	64	21	10	50%
<b>2016-2017</b>	52	35	17	5	29%
<b>2015-2016</b>	66	45	21	13	62%
<b>2014-2015</b>	50	39	11	7	64%
<b>2013-2014</b>	44	33	11	11	100%

b) Demographic breakdown of students in program by gender and ethnicity

		Fall 2011	Fall 2012	Fall 2013	Fall 2014	Fall 2015	Fall 2016
<b>Gender</b>	Female	17	19	26	30	30	30
	Male	17	16	16	18	17	17
<b>Race / Ethnicity</b>	Asian: U.S.	1	0	2	2	2	6
	Black or African-American: U.S.	0	1	1	1	1	2
	Foreign	9	12	11	13	12	9
	Hispanic: U.S.	2	0	0	0	0	1
	Two or more: U.S.	1	0	1	3	3	2
	Unknown: U.S.	1	1	2	3	3	2

	White: U.S.	20	21	25	26	26	25
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c) Program enrollment numbers over time.

	Total Students	New students	Continuing students	Graduates	Withdrawn or dismissed
2016-2017	45	9	36	1	0
2015-2016	47	5	42	8	6
2014-2015	48	13	35	3	0
2013-2014	42	7	35	4	4
2012-2013	35	11	24	2	3

d) Course offerings, course enrollment, and course evaluations

	Semester / Instructor	# Enrolled	Evaluations: Overall score (out of 4) <sup>1</sup>
<b>INST800: The engaged intellectual</b>	Fall 2014 / Ahn	13	3.83
	Fall 2015 / Kraus	6	3.59
	Fall 2016 / Kraus	8	3.86
<b>INST888: Doctoral seminar</b>	Fall 2014 / Findlater	14	3.27
	Spring 2015 / Jaeger	13	3.66
	Fall 2015 / Findlater	5	3.44
	Spring 2016 / Marciano	5	3.44
	Fall 2016 / Marciano	8	2.29

<sup>1</sup> Mean of scores on the following questions: (1) Intellectually challenging; (2) I learned a lot; (3) Instructor treated students with respect; (4) Instructor was well-prepared for class; (5) Overall, instructor was an effective teacher; (6) Course content corresponded with stated objectives; (7) Course contributed significantly to my knowledge of the field; (8) Instructor was knowledgeable; (9) Instructor was helpful.

	Spring 2017 / Frias-Martinez	9	No data
<b>INST808: Research methods</b>	Spring 2016 / Vitak	14	3.83
	Spring 2017 / Winter	8	No data

e) Indicators of student accomplishment for AY 2016 - 2017

- Integrative papers: 6
- Dissertation proposals: 5
- Dissertations: 1
- Wylie Dissertation Fellowships: 2
- All-S.T.A.R. Fellowships: 1
- Publications in the following conferences:
  - CSCW
  - CHI
  - ALISE
  - ECIR (European Conference on Information Retrieval)
  - SIG-IR (Information Retrieval)
  - AAAI (Assoc. for the Advancement of Artificial Intelligence)
  - ICSI (Intn'l Conf on Social Informatics)
  - NetMob
  - ICIS (Intn'l Conf on Information Systems)
    - Best paper award
  - Archiving 2016
  - InfoSocial
  - Afri-CHI
  - ICLS (Intn'l Conf of the Learning Sciences)
  - IDC (CHI - Interaction Design and Children)
  - ASIST (Am. Soc. for Information Science & Technology)
  - iConference
  - CHIIR (Conf. on Human Information Interaction & Retrieval)
- Publications in the following journals:
  - Journal of Science Communication
  - Advances in Librarianship
  - School Library Research
  - Media and Communication
  - Learning Media and Technology
  - Educational Technology
  - Journal of the Medical Library Association
  - Information Services and Use
  - Health Communication

f) Retention/completion/graduation rate numbers over time.

### Retention and Graduation Rates Over Time

Entry Year	Cohort Size	% of students who retained or graduated ...			
		After 1 year	After 2 years	After 3 years	After 4 years
2015	5	100			
2014	12	91.7	75		
2013	8	100	87.5	100	
2012	10	100	90	80	80
2011	10	70	60	50	60

### Average Time to Degree

	2013	2014	2015	2016
<b># PhD Awarded</b>	2	4	1	8
<b>Average Time to Degree</b>	4.3	4.8	3.7	4.8

- g) Data on numbers of graduate employment.  
Of 29 PhD graduates between 2006 - 2016:
- 19 (66%) went into academic positions
    - 5 professional track
      - 4 domestic
      - 1 international
    - 14 tenure track
      - 6 domestic
      - 8 international
  - 4 (14%) went into government positions
  - 5 (17%) went into industrial positions
  - 1 (3%) went to a think tank

h) Student satisfaction survey data (17 responses; Spring 2017)

Question Group	Mean Across Questions (out of 5)	Standard Deviation	Respondent Comments

<b>Satisfaction with course selection</b>	3.22	0.75	6 respondents requested more support in the iSchool curriculum for PhD-level courses. <ul style="list-style-type: none"> <li>• “I had to go outside the iSchool for all of my non-required PhD courses.”</li> <li>• “No PhD level HCI/design courses.”</li> <li>• “Availability of theory and rigor of courses are not sufficient.”</li> <li>• “More special topics style PhD seminars ... I don’t feel like master’s level classes get into the same level of theoretical depth.”</li> <li>• “Online ethnography or mixed methods targeted to HCI/ Information Studies as a discipline.”</li> </ul>
<b>Usefulness of degree planning resources</b>	4.10	0.91	6 respondents were unaware of or had never used the 2-year plan.
<b>Ability to locate program requirements</b>	4.10	0.90	4 respondents complained of the difficulty in finding consistent degree planning information in one place. <ul style="list-style-type: none"> <li>• “All of the resources tend to answer some question, but none seems to answer every question.”</li> </ul>
<b>Usefulness of forms of communication</b>	4.28	0.74	“I sense the iSchool uses the listservs primarily as a vehicle for announcements. I haven’t really seen a ‘discussion’ ... Having more of that could help make the community feel more connected.”
<b>Ability of personnel to address questions or concerns</b>	4.57	0.52	
<b>Topics requested for future 1-hour and 3-hour courses</b>	<b>Skills-oriented:</b> <ul style="list-style-type: none"> <li>• Programming</li> <li>• Web app programming</li> <li>• Data scraping</li> </ul> <b>Research-oriented:</b> <ul style="list-style-type: none"> <li>• Research methods / Research design</li> <li>• Statistical programming</li> <li>• Advanced statistics</li> <li>• How to gather social media data</li> <li>• Social network analysis</li> <li>• Qualitative analysis methods</li> </ul> <b>Theory-oriented:</b> <ul style="list-style-type: none"> <li>• Pedagogy</li> <li>• Theory seminars</li> <li>• Critical / humanistic approaches to info sci</li> </ul>		
<b>Comments on other topics</b>	<ul style="list-style-type: none"> <li>• “It would be nice to develop a professional strand in the PhD program.”</li> <li>• “The support of my fellow students, and the community of faculty and staff helped me through.”</li> </ul>		

	<ul style="list-style-type: none"><li>• “I wish the program was tighter in terms of socialization. Especially ... informal socialization events.”</li><li>• “I am wondering if PhD degree from iSchool is going to be authorized as a STEM degree.”</li></ul>
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