Informatics, PhD

Requirements

The Doctor of Philosophy program in informatics requires at least 72 s.h. of graduate credit. A total of 19 s.h. of core courses are required plus an additional 12 s.h. of courses approved by a student's committee. The remaining 41 s.h. may be completed with additional coursework or through reading or research hours. Students must maintain a major program grade-point average of at least 3.00.

It requires completion of coursework, satisfactory performance on the qualifying exam, comprehensive exam, and the proposal, plus the production and formal defense of a dissertation describing original research results.

Students select an advisor from among the program faculty. On the rare occasion when students choose a PhD advisor who is outside the program, a co-advisor from the program faculty must be designated.

The PhD with a major in informatics requires the following coursework.

Core Courses

Students complete a total of 19 s.h. in core coursework. The student's advisor and the rest of the student's committee consisting of at least two other faculty select remaining courses (12 s.h. minimum) for a total of at least 31 s.h. of coursework.

Programming

Course #       Title                                      Hours
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This course:  Introduction to Informatics              3
CS:5110/IGPI:5110
One of these: Software Engineering Fundamentals in Java 3
CS:3010
Programming Languages and Tools                       3
CS:3210
Topics in Computer Science I                           3
CS:3980
Geospatial Programming                                 3
GEOG:5055/IGPI:5055

Statistics

Course #       Title                                      Hours
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One of these: Introduction to Biostatistics             3
BIOS:4120
Introduction to Statistical Methods                    3
STAT:4143/PSQF:4143

Data Science

Course #       Title                                      Hours
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One of these: Knowledge Discovery                       3
BAIS:6480/IGPI:6480
Statistical Learning                                    3
STAT:4540/BAIS:4540/DATA:4540/IGPI:4540

Databases

Course #       Title                                      Hours
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One of these: Database Systems                          3
CS:4400
Introduction to Geographic Databases                   3
GEOG:4580/IGPI:4581

Human Factors

Course #       Title                                      Hours
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One of these: Research Methods in Human-Computer Interaction 3
CS:4500
Human-Computer Interaction for Computer Science        3
CS:4510
Geographic Visualization                                3
GEOG:5540/IGPI:5540

Ethics

Course #       Title                                      Hours
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This course:  Topics in Computer Science III            1
CS:5980

Elective Core Coursework

Course #       Title                                      Hours
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Coursework selected in consultation with advisor and committee 12

Electives

The remaining 41 s.h. may be completed with additional coursework or through reading or research hours.

Comprehensive Examination

PhD students must pass a comprehensive examination at or near completion of their coursework requirements. Students prepare a 20–30 page survey/discussion (along the lines of the introduction and literature review from an eventual thesis) for distribution to their faculty committee, followed at least two weeks later by a 20–40 minute oral presentation, and a question/answer session.

Students may request that the MS be granted at the time of the comprehensive exam. The MS without thesis is awarded upon successful completion of the comprehensive exam but may, at the examination committee's discretion, be awarded even if students do not pass the exam. Students also may choose to complete the thesis requirements and be awarded an MS with thesis.

Dissertation

Students complete dissertation coursework in consultation with their advisor.

Upon successful completion of all requirements, including the dissertation and its oral defense, students are awarded the Doctor of Philosophy degree.

For more information about the Doctor of Philosophy requirements, see the Interdisciplinary Graduate Program in Informatics website.