INFORMATICS

Degree Requirements

Master of Science (M.S.)

Requirements listed here are in addition to Graduate Council policies listed under GCAC-600 Research Degree Policies. (http://gradschool.psu.edu/graduate-education-policies/)

The M.S. in Informatics requires a minimum of 30 credits at the 400, 500, 600, or 800 level, with at least 18 credits at the 500 or 600 series combined; 27 of the 30 credits must be earned at Penn State. These 30 credits are distributed among the following requirements:

Core Courses (3-6 credits)
All candidates are expected to develop a broad understanding of the core constructs of people, information, technology, and the significant interactions among those elements by taking IST 504. Candidates may also take IST 505 to gain a deeper understanding of research design.

Specialization Courses (12-18 credits)
In consultation with his/her adviser, a candidate is expected to choose courses in one or more areas customized to support the thesis or scholarly paper. In addition to advanced courses in IST, a support area could be in cybersecurity, data science, law, business, education, engineering, the liberal arts, science, or any area that is linked to the information sciences. A list of suggested specialization courses is maintained by the graduate program office.

Research Methods (6 credits)
All candidates must develop a basic understanding of the research methods utilized in the information sciences, by taking at least two research methods courses offered in IST or elsewhere. The focus of the course must be on the methods being learned rather than application of some method to a research topic. A list of courses that will satisfy this requirement is maintained by the graduate program office.

Thesis or Scholarly paper (3-6 credits)
Students may choose a thesis or scholarly paper option. Students who choose the thesis option must register for 6 credits of IST 600 or IST 610, write a satisfactory thesis accepted by the master's committee, the head of the graduate program, and the Graduate School, and pass a thesis defense. The thesis should focus on a well-defined problem relevant to the information sciences. Students who choose the thesis option must also complete IST 505. Students who choose the scholarly paper option must register for 3 credits of IST 594 and complete the scholarly paper. The scholarly paper will be a focused piece of technical work that applies the student's expertise and knowledge base, and that is documented and presented as a scholarly paper report. Students who choose the scholarly paper option must write a scholarly paper that is accepted by their M.S. committee. An oral presentation may be required at the discretion of the student's adviser.

Doctor of Philosophy (Ph.D.)

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The doctoral degree in Informatics requires a minimum of 32 credits, including 14 credits of foundational courses and 18 credits of research and specialization courses in consultation with the student's adviser to support research progress.