



Department of Health Informatics

Guidelines for Ph.D. Process in Biomedical Informatics

September 2004

The UMDNJ-SHRP Ph.D. program in Biomedical Informatics represents an articulated program of study designed primarily to serve health care practitioners, biomedical sciences educators and researchers, and students who have completed an MS degree in: Biomedical Informatics, Computer Science, Engineering, Biology, Biomedical Sciences, or students who hold Master's or advance degrees in the health related professions, or basic sciences. The program is designed to prepare individuals for informatics leadership positions in the schools of health sciences, teaching hospitals, health care organizations, pharmaceuticals, biomedical research laboratories, and government agencies.

Graduates of this program will develop, implement and evaluate informatics algorithms, biomedical computing solutions and technologies for decision support tools for improving clinical practice, and health care delivery and management. Graduates will also design systems for more effective and informative research and education, thus, expanding and advancing the science and methods of biomedical informatics. Students can select one of the following areas of specialization:

1. Bioinformatics/Biotechnology Systems
2. Biomedical Imaging and Image Analysis
3. Clinical Decision Support Systems
4. e-Healthcare Systems
5. Hospital/Healthcare Management Systems

I) Advisement: Each entering student is assigned a faculty advisor who assists the student in initial course selection appropriate to the career goals of the student, selection of a project advisor and an advisory committee for the directed thesis or dissertation project.

II) Didactic Course Requirements

See the Program Brochure.

III) Selection of Research Advisor and Dissertation Committee

[See a separate document.](#)

IV) Qualifying Examination: Students must pass a doctoral qualifying examination, which is designed to test the fundamental knowledge of students in the area of biomedical informatics theory and systems, health care systems, and selected biomedical informatics courses related to the area of specialization. Admission to the doctoral program does not imply candidacy for a degree. Students must take and pass this written examination, consisting of two parts (one from core courses, another from track courses), which is offered twice a year in fall and spring semesters. In order to take this examination, students are recommended to have completed a majority of the core and track course requirements. However, a decision on whether you are ready to take the qualifying exam or not is made by you and your dissertation advisor. If you fail the exam, you are given just one more chance. If you fail the second time, you are asked to leave

the program. Registration for dissertation research is permitted to only those who have passed the qualifying examination.

V) Dissertation Proposal

[See a separate document](#)

VI) Dissertation Research:

After passing the qualifying exam, students must register for 36 credits of BINF8000 dissertation research. The maximum number of credits you can register for BINF8000 is 18 credits/year. Completion of 36 credits of BINF8000 does not automatically imply you have completed your dissertation research. After 36 credits of BINF8000, you may have to register at least one credit for every semester in order to maintain your matriculation status while completing your dissertation.

VII) Oral Defense of Dissertation:

If the dissertation committee approves your dissertation write-up and consider that you are ready to defend your dissertation research in public, the committee chair will make a public announcement through the chair of the department for your dissertation defense.

Your talk is open to public, as well as open question and answer session. It will be followed by the closed questioning by the committee member. You will be asked to leave a room, and the committee will discuss among themselves to reach the final decision on your Ph.D. degree. Even if your dissertation defense is approved, you might still be asked to modify your dissertation to incorporate the issues raised during your defense. Until you submit the final bound copies of dissertation and perform additional procedures (see below), your degree is not awarded.

VIII) Submission of Final Copies of Dissertation

[See a separate document.](#)