Biomedical Informatics, PhD

ESBMIPHD

Prepare for many opportunities across diverse health care settings. Our graduates are quickly employed due to their knowledge and unique skill set in a growing and innovative field.

Program Description

Degree Awarded: PHD Biomedical Informatics
The PhD program in biomedical informatics allows students to develop expertise in areas such as bioinformatics, clinical informatics, population health management and imaging science. The BMI program fosters collaborations among academic researchers, clinical practitioners and regional health care providers to apply new developments in informatics theory to clinical practice, biomedical research and public health.

Additional specialization coursework in an area of focus and emphasis on independent research places students at the leading edge of the field. Strong collaborative relationships with a variety of health care organizations, the bioscience industry and governmental agencies provide an unparalleled opportunity for doctoral students to explore and contribute to advances in informatics for biomedical research, patient care and population health. Students may explore cross-cutting areas such as data science and knowledge representation.

At a Glance

- College/School: [College of Health Solutions](#)
- Location: [Tempe campus](#)

Degree Requirements
84 credit hours, a written comprehensive exam, an oral comprehensive exam, a prospectus and a dissertation

**Required Core (22 credit hours)**
- BMI 502 Foundations of Biomedical Informatics Methods I (3)
- BMI 504 Introduction to Clinical Environments (3)
- BMI 505 Foundations of Biomedical Informatics Methods II (3)
- BMI 515 Applied Biostatistics in Medicine and Informatics (3)
- BMI 540 Problem Solving in Biomedical Informatics (3)
- BMI 560 Teaching in Biomedical Informatics (2)
- BMI 570 Symposium (2)
- BMI 601 Fundamentals of Health Informatics (3)

**Electives (32 credit hours)**

**Research (18 credit hours)**
- BMI 792 Research (18)

**Culminating Experience (12 credit hours)**
- BMI 799 Dissertation (12)

**Additional Curriculum Information**
Due to the diverse academic backgrounds of students requesting admission into this program, many find it necessary to take some coursework in preparation. However, all students take 84 credit hours of approved graduate-level coursework.

**Admission Requirements**

Applicants must fulfill the requirements of both the Graduate College and the College of Health Solutions.

Applicants are eligible to apply to the program if they have earned a bachelor's or master's degree from a regionally accredited institution.

Applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in the last 60 hours of their first bachelor's degree program, or applicants must have a minimum cumulative GPA of 3.00 (scale is 4.00 = "A") in an applicable master's degree program.

All applicants must submit:

1. graduate admission application and application fee
2. official transcripts
3. statement of purpose
4. 3 letters of recommendation
5. GRE scores
6. proof of English proficiency

**Additional Application Information**

An applicant whose native language is not English must provide proof of English proficiency regardless of current residency. Scores for the TOEFL for applicants whose native language is not English is required.

An applicant should have earned a bachelor's degree in biology, computer science, engineering or statistics, or be trained as a postbaccalaureate health professional in medicine, nursing or pharmacy. Those who have earned degrees in other unrelated fields with appropriate academic backgrounds are also considered. However, all applicants must have basic competencies in anatomy and physiology, college calculus, computer programming, general biology and statistics.

The applicant's undergraduate GPA, statement of purpose, GRE scores (verbal, quantitative and analytical are required; the subject test is optional) and depth of preparation in their field are the primary factors affecting admission.

**Application Deadlines**

**Fall**

**Career Opportunities**

Professionals with advanced training in biomedical informatics are in high demand across a variety of sectors and industries, including academics institutions, not-for-profit research institutes, governmental and public health agencies, health care organizations, as well as information technology, biotech and pharmaceutical industries.

Career examples include:

- bioinformatics scientist
- biostatistician
- data scientist
- deep learning engineer
- public health informatics scientist
- research scientist
- senior analyst
- software engineer
- university faculty

**Contact Information**

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