

Biomedical Informatics, BS

ESBMIBS

Interested in bridging your passions for technology and health care? Become an expert at translating biomedical data into knowledge that improves individual and population health outcomes.

Program description

Biomedical informatics is a multidisciplinary field that involves the generation, acquisition, management and analysis of biomedical and health data, and the translation of that data into information and knowledge that can be applied toward improving individual and population health.

Students learn approaches to:

- acquiring data
- data management
- knowledge representation
- modeling and machine learning

Students have the opportunity to conduct research alongside faculty who are experts in bioinformatics, imaging informatics, sensor informatics, artificial intelligence, clinical informatics and population health informatics.

Graduates of the program have a broad set of biomedical informatics knowledge and skills, enabling them to contribute to many areas of health and biomedicine in their future work.

At a glance

- **College/School:** [College of Health Solutions](#)
- **Location:** [Downtown Phoenix](#)
- **Second language requirement:** No

- **First required math course:** MAT 251 - Calculus for Life Sciences
- **Math intensity:** Moderate 

Required courses (Major Map)

[2024 - 2025 Major Map](#)

[Major Map \(Archives\)](#)

Concurrent program options

Students pursuing concurrent degrees (also known as a "double major") earn two distinct degrees and receive two diplomas. Working with their academic advisors, students can create their own concurrent degree combination. Some combinations are not possible due to high levels of overlap in curriculum.

Accelerated program options

This program allows students to obtain both a bachelor's and master's degree in as little as five years. It is offered as an **accelerated bachelor's plus master's degree** with:

[Biomedical Informatics and Data Science, MS](#)

Acceptance to the graduate program requires a separate application. Students typically receive approval to pursue the accelerated master's during the junior year of their bachelor's degree program. Interested students can learn about eligibility requirements and [how to apply](#).

Admission requirements

General university admission requirements:

All students are required to meet general university admission requirements.

[First-year](#) | [Transfer](#) | [International](#) | [Readmission](#)

Tuition information

When it comes to paying for higher education, everyone's situation is different. Students can learn about [ASU tuition and financial aid](#) options to find out which will work best for them.

Change of Major Requirements

A current ASU student has no additional requirements for changing majors.

Students should visit the [Change of Major form](#) for information about how to change a major to this program.

Transfer options

ASU is committed to helping students thrive by offering tools that allow personalization of the transfer path to ASU. Students may use [MyPath2ASU®](#) to outline a list of recommended courses to take prior to transfer.

ASU has [transfer partnerships](#) in Arizona and across the country to create a simplified transfer experience for students. These pathway programs include exclusive benefits, tools and resources, and they help students save time and money in their college journey.

Program learning outcomes

Program learning outcomes identify what a student will learn or be able to do upon completion of their program. This program has the following program outcomes:

- Articulate informatics solutions to improve patient care.
- Implement existing informatics solutions to improve patient care.
- Analyze large data sets to improve decisions for patient care or population health.
- Implement informatics solutions to represent and manage biomedical data

Global opportunities

Global experience

Students gain valuable experience when [studying abroad](#) --- experience that enhances their resumes. With more than 300 programs available, Global Education programs allow students to tailor their experience to their unique interests and skill sets. Students in biomedical informatics are able to expand their knowledge of how health care systems impact society in a variety of cultures, and they experience new and unique information science and technology environments across the globe.

The College of Health Solutions recommends [these programs](#) for students majoring in biomedical informatics.

Career opportunities

Graduates with a degree in the rapidly expanding field of biomedical informatics are prepared for careers in a wide range of settings.

They are employed in positions such as:

- bioinformatician
- data science analyst
- public health informatics scientist

- software engineer

Those with interests in life sciences and technology may see this program as a unique way to combine the two. Others may use this degree as the first step toward medical school, advanced medical research, or graduate-level study in biomedical informatics.

Example job titles and salaries listed below are not necessarily entry level, and students should take into consideration how years of experience and geographical location may affect pay scales. Some jobs also may require advanced degrees, certifications or state-specific licensure.

Career	*Growth	*Median salary
<u>Bioinformatics Scientist</u>	3.9%	\$87,300
<u>Biostatistician</u> ☀	31.6%	\$98,920
<u>Clinical Data Manager</u> ☀	35.2%	\$103,500
<u>Computer Network Analyst</u>	3.5%	\$126,900
<u>Computer Scientist</u> ☀	22.7%	\$136,620
<u>Computer Software Quality Engineer</u> ☀	20.3%	\$99,620
<u>Computer Systems Analyst</u> ☀	9.6%	\$102,240
<u>Data Analyst</u>		\$48,880
<u>Medical and Health Services Manager</u> ☀	28.4%	\$104,830

* Data obtained from the Occupational Information Network (O*NET) under sponsorship of the U.S. Department of Labor/Employment and Training Administration (USDOL/ETA).

☀ Bright Outlook

Contact information

College of Health Solutions | COOR 2nd floor
chs@asu.edu | 602-496-3300