Biomedical Informatics, BS

ESBMIBS

Learn to translate biomedical data into information and knowledge that improve 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.

The BS program in biomedical informatics curriculum includes biomedical informatics, computer science, biology, chemistry, mathematics and statistics. Students learn approaches to acquiring data, learn data management and knowledge representation, learn modeling and machine learning, and they learn to use these capabilities to address problems in the biomedical and health domains. Students have the opportunity to do research alongside faculty who are experts in bioinformatics, imaging informatics, 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
- **Additional Program Fee:** Yes
- **Second Language Requirement:** No
- **First Required Math Course:** MAT 251 - Calculus for Life Sciences
- **Math Intensity:** Substantial
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 and master's degree with:

Biomedical Informatics, MS

Acceptance to the graduate program requires a separate application. During their junior year, eligible students are advised by their academic departments to apply.

Admission Requirements

General University Admission Requirements:
All students are required to meet general university admission requirements.
First-year | Transfer | International | Readmission

Change of Major Requirements

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

Students should refer to https://changemajor.apps.asu.edu 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. Students may learn more about these programs by visiting the admission site: https://admission.asu.edu/transfer/MyPath2ASU.
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 which enhances their resumes. With over 250 programs available, study abroad allows 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. [https://goglobal.asu.edu/](https://goglobal.asu.edu/)

The College of Health Solutions recommends the following study abroad programs for students majoring in biomedical informatics: [https://goglobal.asu.edu/students/major/chs/biomedical-informatics](https://goglobal.asu.edu/students/major/chs/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 data science analysts, bioinformaticians, software engineers, and public health informatics scientists, among others. Those with interests in life sciences and technology may see this program as a unique way to combine the two. Others may find this degree the first step toward medical school or advanced medical research or to continued graduate-level study in biomedical informatics.

Career examples include but are not limited to those shown in the following list. Advanced degrees or certifications may be required for academic or clinical positions.

<table>
<thead>
<tr>
<th>Career</th>
<th>*Growth</th>
<th>*Median Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioinformatics Scientist</td>
<td>2.2%</td>
<td>$85,290</td>
</tr>
<tr>
<td>Biostatistician</td>
<td>34.6%</td>
<td>$92,270</td>
</tr>
<tr>
<td>Clinical Data Manager</td>
<td>not available</td>
<td>not available</td>
</tr>
<tr>
<td>Computer Network Analyst</td>
<td>5.0%</td>
<td>$116,780</td>
</tr>
<tr>
<td>Job Title</td>
<td>Growth Rate</td>
<td>Average Salary</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Computer Scientist</td>
<td>15.4%</td>
<td>$126,830</td>
</tr>
<tr>
<td>Computer Software Quality Engineer</td>
<td>not available</td>
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<tr>
<td>Computer Systems Analyst</td>
<td>7.4%</td>
<td>$93,730</td>
</tr>
<tr>
<td>Data Analyst</td>
<td>6.4%</td>
<td>$50,360</td>
</tr>
<tr>
<td>Medical and Health Services Manager</td>
<td>31.5%</td>
<td>$104,280</td>
</tr>
</tbody>
</table>

* 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 🌿 Green Occupation

Contact Information

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