Microbiology, BS

Are you fascinated by the incredible way the tiniest organisms can impact our lives? Are you eager to make a difference in science, health, and medicine? Explore the wonders of microbiology and set yourself up for success in your future career.

Program Description

The BS degree program in microbiology places emphasis on understanding microorganisms and their interrelationships with other organisms in nature and on the influence of microorganisms in biomedicine and biotechnology.

Despite their size, microbes are fundamental to life on Earth and compose the majority of all Earth's life forms. In addition to their essential contributions to the natural world, microbes have been model experimental subjects due to their impact on human health and ease of manipulation in the laboratory. A significant portion of medical research employs microbiological and immunological methods in order to examine basic genetic and biological phenomena.

Students in the microbiology degree program study the background and current findings in the field and also acquire the critical thinking, laboratory and field skills required to succeed in a career in science.

The major provides excellent training for premedical, predental, preveterinary and prepharmacy students as well as advanced study in microbiology and immunology.

This program is available as an accelerated degree program. Students can visit this website to learn more about accelerated degree programs:

https://sols.asu.edu/degree-programs/accelerated-bachelor-master-science

In addition to the guidelines in the Concurrent Program Options section below, students interested in pursuing concurrent or second baccalaureate degrees in The College of Liberal Arts and Sciences are advised to visit The College's website for more information and requirements.

https://thecollege.asu.edu/concurrent-and-second-baccalaureate-degrees
At a Glance

- **College/School:** [The College of Liberal Arts and Sciences](#)
- **Location:** Tempe campus
- **Additional Program Fee:** Yes
- **Second Language Requirement:** No
- **First Required Math Course:** MAT 251 - Calculus for Life Sciences
- **Math Intensity:** Moderate

Required Courses (Major Map)

2022 - 2023 Major Map
Major Map (Archives)

Concurrent Program Options

Students pursuing concurrent degrees (also known as a âdouble majorâ) 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:

- Biology, MS
- [Global Management (Creative Industries and Design Thinking), MGM](#)
- [Global Management (Digital Audience Strategy), MGM](#)
- [Global Management (Global Business), MGM](#)
- [Global Management (Global Development and Innovation), MGM](#)
- [Global Management (Global Digital Transformation), MGM](#)
- [Global Management (Global Entrepreneurship), MGM](#)
- [Global Management (Global Health Care Delivery), MGM](#)
- [Global Management (Global Legal Studies), MGM](#)
- [Global Management (Integrated Health Care), MGM](#)
- [Global Management (Nonprofit Leadership and Management), MGM](#)
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.

[Freshman](#) | [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](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](https://admission.asu.edu/transfer/MyPath2ASU).

**Global Opportunities**

**Global Experience**

Students gain valuable, resume-enhancing experience when studying abroad. With over 250 programs available, study abroad allows students to tailor their experience to their unique interests and skill sets. Students studying microbiology are able to expand their knowledge of how microbes impact people and
society in a variety of cultures and challenge themselves to adapt and persevere in a new and exciting
culture. [https://goglobal.asu.edu/](https://goglobal.asu.edu/)

The College of Liberal Arts and Sciences recommends the following study abroad programs for students
majoring in microbiology. [https://goglobal.asu.edu/students-major/sls/microbiology](https://goglobal.asu.edu/students-major/sls/microbiology)

## Career Opportunities

The discipline of microbiology is diverse and the job opportunities for microbiologists are enormous. Graduates with a degree in microbiology have opportunities for employment in government, hospitals, and research or industrial laboratories. Many students are also prepared for admission into graduate school and advanced study in dentistry, medicine, veterinary medicine and pharmacy.

Career examples include those shown in the following list; advanced degrees or certifications may be required for academic or clinical positions:

- government
- hospitals
- industrial laboratories (food, dairy, chemical, pharmaceutical, environmental and biotechnology companies)
- public health laboratories
- research laboratories

Many students are also suitably prepared for admission into graduate school and advanced study in these fields:

- dentistry
- medicine
- pharmacy
- veterinary medicine

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>Biological Sciences Professor</td>
<td>9.3%</td>
<td>$85,600</td>
</tr>
<tr>
<td>Clinical Trial Manager</td>
<td>4.8%</td>
<td>$137,940</td>
</tr>
<tr>
<td>Cytotechnologist</td>
<td></td>
<td>not available</td>
</tr>
<tr>
<td>Food Scientist</td>
<td>4.4%</td>
<td>$73,450</td>
</tr>
<tr>
<td>Genetic Counselor</td>
<td>21.5%</td>
<td>$85,700</td>
</tr>
<tr>
<td>Health and Safety Technician</td>
<td>4.8%</td>
<td>$53,340</td>
</tr>
<tr>
<td>Occupational Title</td>
<td>Growth Rate</td>
<td>Salary</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>Laboratory Technologist</td>
<td>not available</td>
<td></td>
</tr>
<tr>
<td>Medical Scientist</td>
<td>6.1%</td>
<td>$91,510</td>
</tr>
<tr>
<td>Microbiologist</td>
<td>3.1%</td>
<td>$84,400</td>
</tr>
<tr>
<td>Molecular Biologist</td>
<td>2.2%</td>
<td>$85,290</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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