

# Microbiology (Medical Microbiology), BS

LAMICMBS

Are you passionate about understanding the way the tiniest organisms impact our lives? Are you eager to make a difference in science, health care or biomedical research? Build a strong foundation of coursework, competencies and critical thinking skills that will prepare you to take on the changing world of medicine.

## Program description

The BS program in microbiology with a concentration in medical microbiology is tailored for students who wish to pursue careers in medicine, other health professions, medical microbiology or biomedical research.

Curriculum aligns with the broad scientific competencies recommended for premedical students. Program participants will delve into microbiology, chemistry, biochemistry, math and physics, cell biology, animal physiology, and human biology and society, making them well versed in the core concepts, competencies and critical intellectual skills necessary for the MCAT and medical school admission.

Students gain hands-on experience with world-renowned faculty, with opportunities to engage in independent research projects or internships.

This program is available as an [accelerated degree program](#).

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.

## At a glance

- **College/School:** [The College of Liberal Arts and Sciences](#)
- **Location:** [Tempe](#)

- **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:

[Biology, MS](#)

[Computational Life Sciences, MS](#)

[Global Management, MGM](#)

[Microbiology, 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:

- Demonstrate capacity for scientific thinking by applying relevant background knowledge to analyze and/or develop scientific explanations.
- Effectively communicate complex scientific concepts, ideas, and reasoning with appropriate use of relevant sources and evidence.
- Demonstrate mastery in performing and interpreting results of microbiology lab tests.

## Global opportunities

### Global experience

Students gain valuable experience when [studying abroad](#). Those pursuing a medical microbiology concentration are able to expand their knowledge of how human biology is impacted by a variety of societies and cultures, and they challenge themselves to adapt and persevere in a new and exciting culture.







With more than 300 programs available, study abroad allows students to tailor their experience to their unique interests and skill sets, and gain experience that enhances their resumes. The College of Liberal Arts and Sciences recommends these [study abroad programs for students majoring in medical microbiology](#).

## Career opportunities

The medical microbiology concentration within the microbiology major provides students with a mastery of the competencies and prerequisite requirements valued by graduate programs in medical, dental and optometry fields, as well as other programs that prepare students to become physician assistants or physical therapists.

The Bachelor of Science degree program also prepares students with an understanding of the process of science and knowledge of foundational concepts in biological sciences, chemistry, physics and statistics, and the ability to understand and apply core microbiology concepts. This groundwork prepares students for direct entry into biology research careers in a vast number of areas, including cellular biology, immunology, bacteriology and virology.

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><a href="#">Cytotechnologist</a></u>            | 4.9%    | \$57,380       |
| <u><a href="#">Dentist</a></u>  | 4.4%    | \$155,040      |
| <u><a href="#">Histology Technologist</a></u>      | 4.9%    | \$57,380       |
| <u><a href="#">Laboratory Technologist</a></u>   | 4.9%    | \$57,380       |
| <u><a href="#">Medical Doctor (MD)</a></u>  | 2.5%    | \$214,460      |
| <u><a href="#">Microbiologist</a></u>            | 5.2%    | \$81,990       |
| <u><a href="#">Optometrists</a></u>              | 8.8%    | \$125,590      |
| <u><a href="#">Orthopedic Surgeon</a></u>   | 1.6%    | \$0            |
| <u><a href="#">Pharmacist</a></u>   | 2.6%    | \$132,750      |
| <u><a href="#">Physician Assistant (PA)</a></u>  | 26.5%   | \$126,010      |

\* 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

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