Microbiology, BS

LAMICBS

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? Dive in and explore the wonders of microbiology, and set yourself up for success in your future career.

Program description

In the BS degree program in microbiology students will develop an understanding of microorganisms, their interrelationships with other organisms and their influence in biomedicine and biotechnology.

They investigate the fundamental nature of microbes, explore the role of microbes as model experimental subjects and examine the significant portion of medical research that employs microbiological and immunological methods in order to understand basic genetic and biological phenomena.

In addition to coursework, students gain hands-on laboratory and field experience by working with world-renowned faculty with opportunities to engage in independent research projects and 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 (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 (Nonprofit Leadership and Management), MGM

Global Management (Public Administration), MGM

Global Management (Public Policy), MGM

Global Management (Sustainability Solutions), MGM

Global Management (Sustainable Tourism), MGM

Global Management, MGM

Microbiology, MS

Molecular and Cellular Biology, 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, resume-enhancing experience when studying abroad. 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.

With more than 300 programs available, study abroad allows students to tailor their experience to their distinct interests and skill sets. The College of Liberal Arts and Sciences recommends these study abroad programs for students majoring in microbiology.

Career opportunities

The microbiology major provides students with critical thinking skills in a diverse discipline, giving them a solid platform for advanced research, graduate study and other professional programs, including dentistry, medicine, veterinary medicine and pharmacy.

The Bachelor of Science degree program also prepares students for direct entry into a variety of careers and positions, including government, hospitals, and research or industrial laboratories pursuing projects in food, dairy, chemicals, pharmaceuticals, environment, biotechnology and public health.

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
Biological Sciences Professor	8.6%	$81,650
Clinical Trial Manager	4.8%	$144,440
Cytotechnologist	4.9%	$57,380
Food Scientist	7.5%	$79,860
Genetic Counselor	16.1%	$89,990
Health and Safety Technician	10.1%	$57,970
Laboratory Technologist	4.9%	$57,380
Medical Scientist	9.8%	$99,930
Microbiologist	5.2%	$81,990
Molecular Biologist	3.9%	$87,300

* 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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