Molecular Biosciences and Biotechnology, BS

LAMBBBS

Are you fascinated by the interplay between biology and technology? Are you eager to make a difference through groundbreaking research? Dive in and explore the rapidly expanding field of biotechnology.

Program description

In the BS degree program in molecular biosciences and biotechnology, students discover advanced disciplines in life sciences research and explore the exciting and rapidly growing field of biotechnology.

They examine the interface between molecular biology and biotechnology that drives major advancements in knowledge and applied research and development.

In addition to coursework, students gain hands-on research and business experience through a capstone course with world-renowned faculty. Students also have access to a dedicated mentoring program that provides them with the opportunity to engage in independent and collaborative research projects and receive feedback and advice on career choices, internships and more.

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:

Biochemistry (Medicinal Chemistry), MS

Biology, MS

Computational Life Sciences, MS

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 preparedness for graduate/professional degree programs and/or employment.

Global opportunities

Global experience
Students gain valuable, resume-enhancing experience when studying abroad. Students majoring in molecular biosciences and biotechnology can expand their knowledge of how science impacts society in a variety of cultures and how technology and culture intertwine across the globe.

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

Career opportunities

The Bachelor of Science degree program in molecular biosciences and biotechnology provides students with a solid base of knowledge and practical expertise that will enable them to pursue advanced research and graduate study in biological sciences, medicine, sustainability and technology.

The program also prepares students with critical thinking, hands-on research and business entrepreneurship that will prepare them for direct entry into a wide variety of careers in a dynamic and expanding field. Graduates pursue positions in agriculture (green biotechnology, leading to improved crops or production of vaccines in plants); health care (red biotechnology, leading to better therapeutics, diagnostics and personalized medicine); and industry (white biotechnology, leading to sustainable production of energy, enzymes and chemicals).

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
Bioinformatics Scientist	3.9%	$87,300
Bioinformatics Technician	6.2%	$71,700
Biological Sciences Professor	8.6%	$81,650
Clinical Trial Manager	4.8%	$144,440
Geneticist	3.9%	$87,300
Health Sciences Manager	4.8%	$144,440
Hydrogeologist	4.8%	$144,440
Medical Scientist	9.8%	$99,930
Molecular Biologist	3.9%	$87,300
Nanosystems Engineer	3.3%	$104,600

* 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

School of Life Sciences | LSC 104
sols.advising@asu.edu | 480-727-6277