Molecular Biosciences and Biotechnology, BS

Do you want to make a difference in the world? In molecular biosciences, you can help produce ground-breaking research in biology, biochemistry, biophysics, genetics, genomics and immunology.

Program Description

The BS program in molecular biosciences and biotechnology encompasses many of the cutting-edge disciplines in life sciences research. Biotechnology is an exciting, rapidly growing field with major applications 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).

This molecular biosciences and biotechnology degree program focuses on the interface between molecular biology and biotechnology. The interface drives major advancements in knowledge and applied research and development, such as the development of next-generation biomedical products or biofuels. Hands-on research and the capstone course with both science and business or entrepreneurial components round out this exciting program.

This program is available as an accelerated degree program. Students may 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 “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:

- Biochemistry (Medicinal Chemistry), MS
- Biology, MS
- Global Management, MGM
- Microbiology, MS
- Molecular and Cellular Biology, 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.

- 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 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.

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 majoring in molecular biosciences and biotechnology are able to expand their knowledge of how science impacts society in a variety of cultures and how technology and culture intertwine across the globe. https://goglobal.asu.edu/

The College of Liberal Arts and Sciences recommends the following study abroad programs for students majoring in molecular biosciences and biotechnology: https://goglobal.asu.edu/students/major/sls/molecular-biosciences-biotechnology.

Career Opportunities

The molecular biosciences and biotechnology degree program provides an excellent background and training for a growing number of careers that incorporate this innovative area of the molecular life sciences. Independent research and courses with classroom plus lab components result in a solid base of knowledge and practical expertise in biotechnology and the molecular biosciences, providing many options for further education or for entering the workforce.
Many molecular biosciences and biotechnology graduates enter graduate programs in a molecular biosciences and biotechnology-related area. A number also enroll in medical school, other health-related professional programs or in other advanced programs. Graduates also have the knowledge and technical skills to enter the biotechnology workforce in an area matching their expertise and interest.

The molecular biosciences and biotechnology program has a faculty mentoring program which provides students with the opportunity to speak with faculty regarding career choices, selection and timeline of major courses and of independent research projects, and much more.

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>Bioinformatics Technician</td>
<td>not available</td>
<td></td>
</tr>
<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>Geneticist</td>
<td>2.2%</td>
<td>$85,290</td>
</tr>
<tr>
<td>Health Sciences Manager</td>
<td>4.8%</td>
<td>$137,940</td>
</tr>
<tr>
<td>Hydrogeologist</td>
<td>4.8%</td>
<td>$137,940</td>
</tr>
<tr>
<td>Medical Scientist</td>
<td>6.1%</td>
<td>$91,510</td>
</tr>
<tr>
<td>Molecular Biologist</td>
<td>2.2%</td>
<td>$85,290</td>
</tr>
<tr>
<td>Nanosystems Engineer</td>
<td>1.3%</td>
<td>$103,380</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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