Biology (Pharmacology/Toxicology), BS

The biology program with a concentration in pharmacology and toxicology at ASU’s West campus studies how foreign materials react with our bodies, which has been an intense and enduring venture that has yielded astounding breakthroughs and contributions to the medical community.

Program Description

The pharmacology and toxicology concentration of the BS program in biology provides an emphasis in the biochemical, molecular and physiological components of drug and body interactions. The degree program emphasizes experiential learning and all required core courses have laboratories. By learning in an integrative environment that emphasizes the connectedness of the disciplines, students gain a better understanding of larger scientific concepts, and they can view these concepts from multiple perspectives. To have a thorough understanding of the interactions of chemicals in the biological system, students study both biology and chemistry and become familiar with chemical interactions at physiological, molecular and cellular levels. Undergraduates have the opportunity to conduct independent research under the mentorship of faculty members or in internships outside the school.

This major is eligible for the Western Undergraduate Exchange (WUE) program at the following location: West campus. Students from Western states who select this major and campus may be eligible for reduced nonresident tuition at a rate of 150 percent of Arizona resident tuition plus all applicable fees. See more information and eligibility requirements on the Western Undergraduate Exchange (WUE) program.

At a Glance

- **College/School:** New College of Interdisciplinary Arts and Sciences
- **Location:** West campus [WUE]
- **Additional Program Fee:** No
- **Second Language Requirement:** No
- **First Required Math Course:** MAT 210 - Brief Calculus.
- **Math Intensity:** Moderate
Required Courses (Major Map)

2018 - 2019 Major Map
Major Map (Archives)

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://students.asu.edu/changingmajors for information about how to change a major to this program.

Transfer Agreements

ASU has partnered with colleges and universities in Arizona, California, Illinois and Washington to provide transfer curriculum pathways. Students should select their current institution to see if there is a partnership agreement between the institution and ASU for this degree program. Students who do not see their state or institution listed should check back as ASU is always working on creating new partnerships.

Transfer from a Maricopa Community College in Arizona
Select a college
• Chandler-Gilbert Community College

Transfer from an Arizona Community College
Select a college
• Arizona Western College
• Central Arizona College
• Cochise College

Transfer from another state
Select a state
• California
• Illinois
• Washington
| Estrella Mountain Community College | Coconino Community College | Another state |
| GateWay Community College | Dine College | |
| Glendale Community College | Eastern Arizona College | |
| Mesa Community College | Gila Community College | |
| Paradise Valley Community College | Mohave Community College | |
| Phoenix College | Northland Pioneer College | |
| Rio Salado College | Pima Community College | |
| Scottsdale Community College | Tohono O'odham Community College | |
| South Mountain Community College | Yavapai College | |

### Global Opportunities

#### Global Experience

With over 250 programs in more than 65 countries (ranging from one week to one year), study abroad is possible for all ASU students wishing to gain global skills and knowledge in preparation for a 21st century career. Students earn ASU credit for completed courses, while staying on track for graduation, and may apply financial aid and scholarships toward program costs. [https://mystudyabroad.asu.edu/](https://mystudyabroad.asu.edu/).

### Career Opportunities

The bachelor's degree program in biology with a concentration in pharmacology and toxicology prepares students for occupations such as:

- environmental toxicologist
- laboratory researcher
- pharmacist
- physician
- physician's assistant
- veterinarian

Graduates may work in governmental agencies or private companies in areas such as:
• clinical trials
• product safety evaluation
• regulatory affairs
• teaching

Graduates are also prepared for entry-level employment in the growing field of environmental toxicology as well as for graduate or professional programs in pharmacology and toxicology.

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 Technician</td>
<td>10.2%</td>
<td>$43,800</td>
</tr>
<tr>
<td>Climate Change Analyst</td>
<td>11.1%</td>
<td>$69,400</td>
</tr>
<tr>
<td>Environmental Protection Specialist</td>
<td>11.1%</td>
<td>$69,400</td>
</tr>
<tr>
<td>Environmental Specialist</td>
<td>12.1%</td>
<td>$45,490</td>
</tr>
<tr>
<td>Family Physician</td>
<td>14.3%</td>
<td>$198,740</td>
</tr>
<tr>
<td>Industrial Ecologist</td>
<td>11.1%</td>
<td>$69,400</td>
</tr>
<tr>
<td>Medical Scientist</td>
<td>13.4%</td>
<td>$82,090</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>5.6%</td>
<td>$124,170</td>
</tr>
<tr>
<td>Surgeon (General)</td>
<td>11.4%</td>
<td>#</td>
</tr>
<tr>
<td>Veterinarian (Vet)</td>
<td>18.8%</td>
<td>$90,420</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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