Biochemistry (Medicinal Chemistry), BS

LABCHMBS

Learning to solve medicinal problems with molecular tools is the goal of this program. You will learn how medicines work and how to design them. This degree prepares you to enter scientific and health careers with your strong training in critical thinking and interdisciplinary, scientific problem-solving.

Program Description

The science of biochemistry is about understanding the chemical processes of living organisms. Discoveries of new drugs, the recognition and control of pathogens, development of new catalysts for energy transformations, and the production of new materials and solutions to problems such as food production and environmental remediation depend upon a thorough grounding in this area.

The BS degree program in biochemistry with a concentration in medicinal chemistry features an emphasis on the application of chemistry to the design and function of medicines. This program is appropriate for further study of biochemistry or related sciences in graduate school as well as medical, dental or pharmacy school.

At a Glance

- **College/School:** College of Liberal Arts and Sciences
- **Location:** Tempe campus
- **Additional Program Fee:** Yes
- **Second Language Requirement:** No
- **First Required Math Course:** MAT 270 - Calculus w/Analytic Geometry I
- **Math Intensity:** Substantial

Required Courses (Major Map)

2018 - 2019 Major Map
Accelerated Degrees

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
Nanoscience, PSM

Acceptance to the graduate program requires a separate application. During their junior year, eligible students will be 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://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
Transfer from an Arizona Community College
Transfer from another state
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

A solid undergraduate education in biochemistry provides the necessary background for career paths in chemical industries and is useful for careers in governmental regulation, health care, research and other areas.

Students planning careers in medicine, dentistry, pharmacy or veterinary medicine often pursue the medicinal chemistry concentration, with supporting work in biology and chemistry as the route for preprofessional training.
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>Clinical Trial Manager</td>
<td>9.9%</td>
<td>$118,970</td>
</tr>
<tr>
<td>College/University Professor</td>
<td>9.4%</td>
<td>$64,480</td>
</tr>
<tr>
<td>Dentist</td>
<td>19.4%</td>
<td>$151,440</td>
</tr>
<tr>
<td>Epidemiologist</td>
<td>8.8%</td>
<td>$69,660</td>
</tr>
<tr>
<td>Health Sciences Manager</td>
<td>9.9%</td>
<td>$118,970</td>
</tr>
<tr>
<td>Hydrogeologist</td>
<td>9.9%</td>
<td>$118,970</td>
</tr>
<tr>
<td>Lawyer</td>
<td>8.2%</td>
<td>$119,250</td>
</tr>
<tr>
<td>Medical Doctor (MD)</td>
<td>14.6%</td>
<td>$192,930</td>
</tr>
<tr>
<td>Medical Scientist</td>
<td>13.4%</td>
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<tr>
<td>Pharmacist</td>
<td>5.6%</td>
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<tr>
<td>Scientist/Biochemist</td>
<td>11.5%</td>
<td>$91,190</td>
</tr>
<tr>
<td>Technical Writer</td>
<td>11.0%</td>
<td>$70,930</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**

Schedule an advisor appointment
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