In our medical microbiology program, you'll study bioethics, cell biology and immunology --- all applicable to the changing world of medicine. You'll develop critical-thinking skills important for various careers in the biomedical sciences or prepare for advanced education in medical, veterinary, dental, pharmacy and physician assistant school.

Program Description

The medical microbiology concentration serves students in the microbiology BS degree program who aim to pursue careers in health professions, medical microbiology or other areas of biomedical research.

The curriculum aligns with the scientific competencies recommended for premed students in a report of the American Medical Colleges and the Howard Hughes Medical Institute Committee and are also reflected in the 2015 changes to the MCAT. Coursework includes many of the courses in the microbiology major, including chemistry, biochemistry, math and physics, but some microbiology courses have been replaced with cell biology, animal physiology and courses that relate to human biology and society.

The concentration program emphasizes core concepts, competencies and critical intellectual skills necessary to succeed in medical school or biomedical research. The coursework that students need to prepare for the MCAT or medical school admission are included in the concentration.

This program is available as an accelerated degree program. Students can visit this website to learn more about accelerated degree programs: https://sols.asu.edu/degree-programs/accelerated-bachelor-master-science.

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 251 - Calculus for Life Sciences.
  
or MAT 270 Calculus with Analytical Geometry I
- **Math Intensity:** Moderate

### Required Courses (Major Map)

2018 - 2019 Major Map

Major Map (Archives)

### 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:

- **Biology, MS**

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

### Transfer Options
ASU is committed to helping you thrive by offering tools that allow you to personalize your transfer path to ASU. Students may use the Transfer Map search 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 help students save time and money in their college journey. Learn more about these programs by visiting the Admissions site.

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/.

Career Opportunities

Upon completing the bachelor's degree program in microbiology with a concentration in medical microbiology, students will have fulfilled the majority of prerequisite requirements and mastered many of the competencies valued by graduate programs in medical, dental and optometry fields and by programs which prepare students to be physician assistants or physical therapists. Additionally, graduates of this program will have a practical understanding of the process of science, preparing them for a career in research. Students will have knowledge of foundational concepts in biological sciences, chemistry, physics and statistics as well as the ability to understand and apply core microbiology concepts. This will prepare students to enter research in a number of areas including, but not limited to, cellular biology, immunology, bacteriology and virology.

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>Cytotechnologist 🌵</td>
<td>11.5%</td>
<td>not available</td>
</tr>
<tr>
<td>Occupation</td>
<td>Growth Rate</td>
<td>Salary</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Dentist</td>
<td>19.4%</td>
<td>$151,440</td>
</tr>
<tr>
<td>Family Physician</td>
<td>14.3%</td>
<td>$198,740</td>
</tr>
<tr>
<td>Histotechnologist and Histologic Technician</td>
<td>11.5%</td>
<td>not available</td>
</tr>
<tr>
<td>Laboratory Technologist</td>
<td>11.5%</td>
<td>not available</td>
</tr>
<tr>
<td>Medical Doctor (MD)</td>
<td>14.6%</td>
<td>$192,930</td>
</tr>
<tr>
<td>Microbiologist</td>
<td>8.2%</td>
<td>$69,960</td>
</tr>
<tr>
<td>Optometrists</td>
<td>17.9%</td>
<td>$110,300</td>
</tr>
<tr>
<td>Pharmacist</td>
<td>5.6%</td>
<td>$124,170</td>
</tr>
<tr>
<td>Physician Assistant (PA)</td>
<td>37.3%</td>
<td>$104,860</td>
</tr>
<tr>
<td>Surgeon</td>
<td>14.4%</td>
<td>#</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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